WEBER COUNTY SUMMARY CONTRACT SHEET

CONTRACT NO.________________________

The Originating Department and Preliminary Approval Sections must be completed BEFORE submitting contract for the agenda.

ORIGINATING DEPARTMENT

TYPE OF CONTRACT: ☒ New ❒ Renewal ❒ Change Order to Contract #

CONTRACTOR/VENDOR: Aerographics Geospatial Services

Address: 40 W Oakland Avenue SLC, UT 84115

Phone: 801-487-3273 Contact Person: Brian Marz

W-9 Attached ❒ N/A ❒ Email: bmarz@aero-graphics.com

CONTRACT TITLE: Photogrammeteric Mapping Services for 2550 S & 3300 S

PURPOSE:

This contract is for photogrammeteric mapping services to be done on both roadway projects in one flight for cost savings, this will be paid for 50/50 by WACOG CP funds awards to both projects.

# OF ORIGINALS ENCLOSED: at least **2** or 1/entity: 2	ALL ATTACHMENTS INCLUDED: ☒ Yes ❒ No
EFFECTIVE DATE: 5-30-2017	TERMINATION DATE:

ORG: ~~36490000~~ 21310000	OBJECT: 630000	PROJECT: 31016100022 & 31016100023

AMOUNT BY YEAR: $ 12,965.00	❒ Revenue ☒ Expenditures	☑ One-Time ❒ Ongoing

COMMISSION PRESENTER + PHONE #: Jared Andersen 8009

SPECIAL INSTRUCTIONS/COMMENTS:

Please return to Rochelle

PRELIMINARY APPROVALS

DEPTARTMENT HEAD	APPROVED BY: SW	DATE APPROVED: 5/25/17	RECOMMENDED ☑ YES ❒ NO
COUNTY ATTORNEY	APPROVED BY: Courtlan P. Erickson	DATE APPROVED: 5-25-17	REVISIONS NECESSARY ❒ YES ☒ NO
PURCHASING:	APPROVED BY: [signature]	DATE APPROVED: 7-20-17	COMPLIES W/ PURCHASING POLICIES ☑ YES ❒ NO
COMPTROLLER:	APPROVED BY: [signature]	DATE APPROVED: 7/31/17	BUDGET AVAILABLE: ☑ YES ❒ NO

COMMENTS:

COUNTY COMMISSION APPROVAL

COMMISSION APPROVAL:	DATE APPROVED:

VOTING RECORD: Ebert Gibson Harvey

COMMENTS:

RETURN AN ORIGINAL CONTRACT TO THE CLERK/AUDITOR'S OFFICE AFTER ALL SIGNATURES HAVE BEEN OBTAINED

WEBER COUNTY

PUBLIC WORKS /ENGINEERING
(801) 399-8374
FAX: (801) 399-8862
Jared Andersen, P.E.
County Engineer

May 17, 2017

RE: Aerographics Contract

To Whom it may Concern,

Attached is a contract for Aerographics to fly 2550 South and 3300 South in one flight for $12,500. This has come about through our traditional RFP process. We received proposals on both roadway projects, CRS was awarded 2550 South and Meridian was awarded 3300 South and both consultants have proposed Aerographics on their projects. Given the proximity of these two projects, I asked Aerographics for a quote to fly them in one flight and, as suspected, it will save money to contract with them directly, sending them in the air once, rather than to have the consultants contract with them individually, sending them in the air twice. Attached are copies of the proposals from both consultants showing their intent to use Aerographics. I've consulted with Courtlan and we believe this falls within the competitive bidding exception found in county code section 2-9-53(a)(8)(g): "Such other personal property or services as the commission may, upon the recommendation of the purchasing agent, and the prior approval of the commission, determine to be, by their nature, not adapted to award by competitive bidding." This is applicable because we aren't the ones who were responsible for contracting for this work to be done in the first place, but by contracting directly with the people our contractors already committed to hire, we are saving taxpayer money.

Please let me know if you have any questions.

Sincerely,

Rochelle Pfeaster
Weber County Engineering
801-399-8372

2380 Washington Blvd., Suite 240
Ogden, Utah 84401-1473

aero-graphics
GEOSPATIAL SERVICES

April 26, 2017

Rochelle Pfeaster
Weber County
2380 Washington Boulevard
Ogden Utah, 84401

Subject: 2550 South and 3300 South

Dear Ms. Pfeaster,

I've prepared this proposal detailing Photogrammetric Mapping services for the 2550 South and 3300 South projects in Weber County.

SCOPE OF SERVICES

Aero-Graphics will furnish the following products and services for the project areas delineated on the attached figure:

Photogrammetry Collection

- Digital aerial photography flown at a nominal ground sample distance of 0.1'.
- One-foot contours, DTM surface, and planimetry in DWG format.
- Orthorectified color imagery in TIFF and SID formats at 0.1' pixel resolution.

TECHNICAL APPROACH

Targeting and Surveying of Aerial Control Points

Prior to photography, the county's survey consultant will target the twenty-four (24) control point locations as identified in the attached figure. The aerial targets need to be conventional crosses with 1' x 3' arms (6' overall). All targets need to be clearly visible from the air and contrast with the ground. Monuments are to be flush with the ground. Upon notice to proceed, Latitude and Longitude will be provided for positioning targets. Since target locations are critical, any change in target location needs to be coordinated with Aero-Graphics prior to flight.

The survey consultant will assign horizontal coordinates and elevations to all targeted control points. Coordinates and elevations need to be accurate to within ± 0.1'. The control listing should include the following: Target Number, NAD83 Latitude and Longitude, Coordinates, Monument Elevation and Ground Elevation.

PHONE 801-487-3273 · FAX 801-487-3313
WEB www.aero-graphics.com
40 West Oakland Avenue Salt Lake City, UT 84115

Aerial Photography

A turbocharged aircraft equipped with an UltraCam Eagle precision digital sensor will be used for this project. This camera features IMU-driven forward motion compensation, gyro-stabilization, precise geometry and radiometry, and airborne GPS capability. It also is equipped with an Applanix PosTRACK navigation system designed to virtually eliminate tip/tilt/crab error at time of exposure caused by adverse air conditions. Stereo 3-band (RGB) GPS/IMU imagery will be acquired at a ground sample distance (GSD) of 0.1'.

Airborne GPS/IMU – Imagery Post Processing

To support the airborne GPS/IMU flight, existing CORS stations and various other local GPS stations will be referenced simultaneously using Applanix PosPac software.

Following the flight, Aero-Graphics will download the imagery and GPS/IMU data and perform color balance and survey data post processes.

Analytical Aerotriangulation

Fully analytical aerotriangulation will be used to truth ground control and refine exterior orientation parameters for each image.

Digital Mapping

One-foot contours will be software generated from manually collected spot elevations and break lines. One-foot contours and DTM surface data will extend to the limits of the BLUE boundaries identified in Figure 1. Planimetry will include paved and dirt roads; building outlines; utility poles and power line ticks; bridges; rivers, canals, and major drainages; major vegetation outlines; railroads and other features visible, identifiable and standard for Aero-Graphics' 1"=50' scale mapping.

Ortho Imagery

High-end digital workstations will be used to process the orthorectified imagery. The surface data described above will be used to orthorectify the high resolution color imagery. As necessary, adjacent images will be tone matched as best possible and mosaicked into butt-matching sheets. Imagery will be delivered in TIFF and SID formats at a pixel resolution of 0.1'.

ACCURACY

Data will meet or exceed National Map Accuracy Standards associated with 1' contours.

SCHEDULE

Photo and LiDAR Acquisition..... within two days of targets being set, weather permitting
Contours, Surface Data, and Ortho Imagery .....four weeks after image processing

PRICING

- Digital aerial photography flown at a nominal ground sample distance of 0.1'.
- One-foot contours, DTM surface and planimetry in DWG format.
- Orthorectified color imagery in TIFF and SID formats at 0.1' pixel resolution.

Project Total .....$12,965.

Pricing is valid for 30 days. Terms are Net 30 days with partial invoices submitted as tasks are completed.

In the event any party to this Agreement defaults in the performance of any of its obligations and duties hereunder, including without limitation the payment of any fees due hereunder, such defaulting party agrees to pay all costs and expenses, including reasonable attorney's fees and expenses, incurred by the non-defaulting party in exercising, pursuing, or protecting any right or remedy available to it as a result of such default, or in interpreting or enforcing any term of this Agreement, whether such costs and expenses are incurred prior to, during, or subsequent to any arbitration, litigation, bankruptcy, reorganization, receivership, appellate, or other proceeding.

If you are in agreement with this proposal, and would like Aero-Graphics to proceed with this project, please sign and return this proposal, keeping a copy for your records.

Should you have any questions or require further information, please call me at (801) 428-3104.

Yours truly,

AERO-GRAPHICS, INC.

Brad Marz, CP, GISP

Accepted:

Date: 5/23/17

By: JARED ANDERSEN (Name) _____ (Signature)

PO #: _____

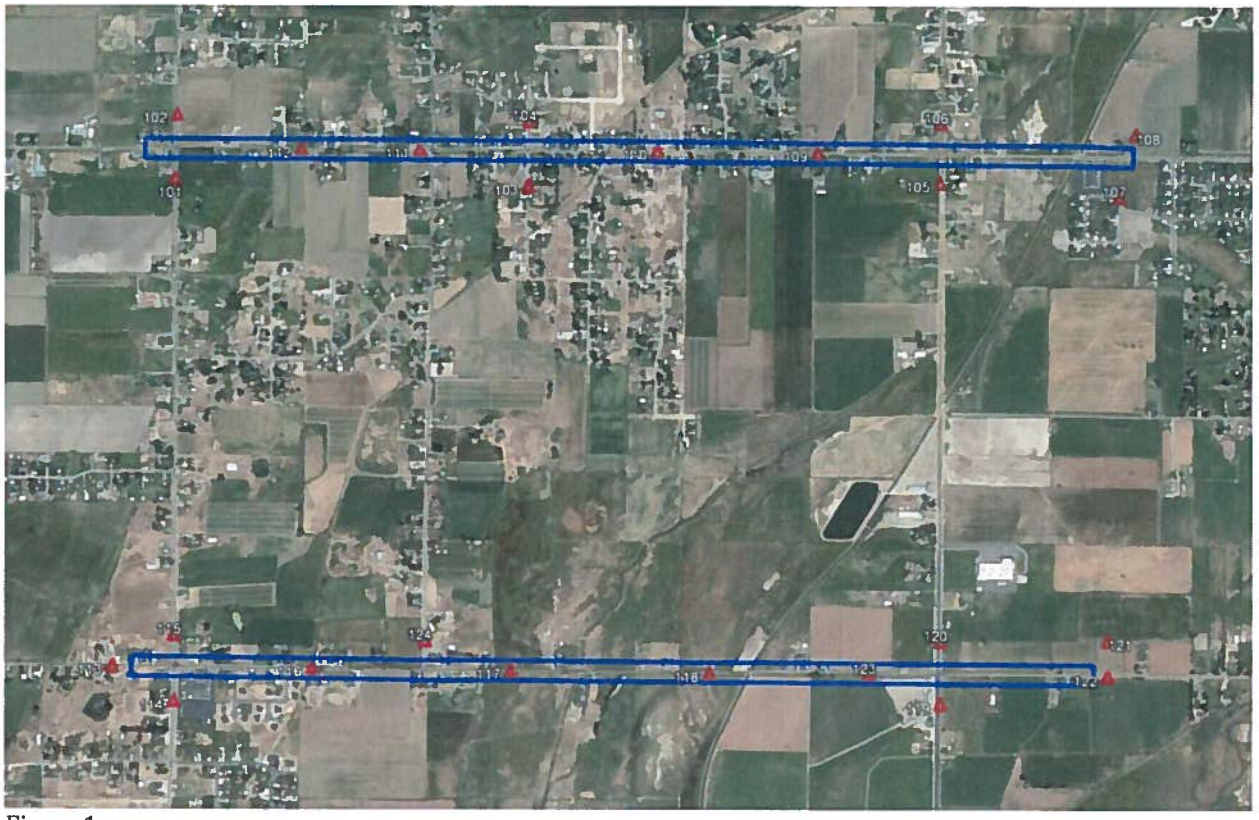
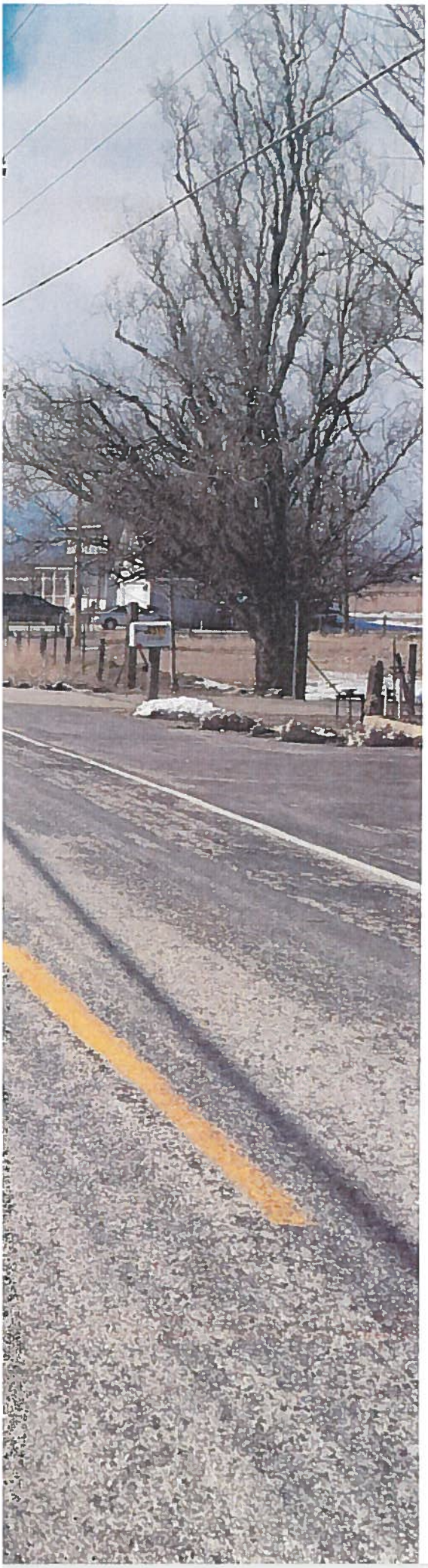


Figure 1

IN WITNESS WHEREOF, the parties have signed and subscribed their names hereon and have caused this agreement to be duly executed as of the day _____ and year _____.

WEBER COUNTY

By:_____
Commission Chair James Ebert



CRS ENGINEERS
Answers to Infrastructure®

Proposal to Provide

Surveying and Design Services on

2550 South

to

Weber County

March 8, 2017

A. Transmittal Letter

CRS ENGINEERS
Answers to Infrastructure®

March 8, 2017

Brianna Sederholm
Weber County Purchasing Agent
2380 Washington Blvd., Ste 260
Ogden, UT 84401

Re: Proposal for Surveying and Design Services - 2550 South

Dear Selection Committee,

Weber County is a very highly valued client. At CRS, we appreciate and work hard to bring exceptional value and service to the County. With our extensive experience, and the strong, established working relationships with the County and other stakeholders, we will uniquely move your goals forward on the 2550 South corridor project.

In accordance with the *Request for Proposal (RFP)*, we offer the following statements:

- CRS will participate in the contract and comply with all terms and conditions as indicated in the *Request for Proposal (RFP)*.
- CRS does not discriminate in its employment practices with regard to race, color, religion, age (except as provided by law), sex, marital status, political affiliation, national origin, or handicap.
- My signature below certifies that the contents of this proposal are authorized on behalf of CRS Engineers.
- As the key contact person, I can be reached by phone at 801.558.6251 (cell) or 801.939.5565 (office). If I am unavailable, please contact Gary Myer, PE, Project Manager, at 801.599.7476 (cell) or 801.939.5565 (office), or secondly Mary Porter, PE, Design Lead, at 801.643.2613 (cell) or 801.939.5565 (office).
- The attached Appendices includes the *Respondent Questionnaire* (see *Attachment A*) and the *Conflict of Interest Form* (see *Attachment B*).

Please contact us with any questions. We look forward to being of service.

Sincerely,
CRS Engineers

Matt Hirst

Matt Hirst, PE
Principal
801.558.6251 (cell) or matt.hirst@crsengineers.com

B. Work Plan and Project Approach

B. WORK PLAN AND PROJECT APPROACH

2550 South is becoming an increasingly vibrant and utilized east-west arterial for residents in unicorporated Weber County to access I-15. With the recent widening completed by West Haven City on 2550 South, and other roadway improvements in the area, widening the roadway along the County owned portion is crucial. The project will address important safety and driveability issues—from narrow lanes and shoulders to deep, open ditches, and canals.

This project is a vital step as the County prepares for growth and moves forward with plans to widen 2550 South from the West Haven City Limits (approximately 3200 West) to 4700 West. Widening will provide a consistent 80-foot fixed right of way (ROW) with a minimum of three lanes to increase capacity, safety and add a continuous turning lane for residents on the corridor.

It is our understanding the approach to ROW acquisition will be on a "willing seller/willing buyer" basis. With this in mind, we will work closely with the County to facilitate a smooth and positive ROW acquisition process.

Advantages and Unique Benefits to the County

CRS is especially positioned to help the County accomplish their vision and address the challenges for this project. We offer:

- Experience delivering WACOG (Weber Area Council of Governments) funded projects from concept to final design and construction.
- Experience developing an alignment to minimize impacts to property owners and infrastructure.
- The ability to deliver a consistent and effective message to the residents through in-home visits and public meetings.
- Knowledge from helping to pioneer processes that will be used on this and future County projects.
- An in-depth understanding of WACOG—from Corridor Preservation and other funding purposes/allowances to established relationships with WACOG staff.
- The know-how to successfully navigate permitting with the US Army Corp of Engineers to minimize and appropriately address salt playa, wetlands, and other environmental impacts.
- Expert knowledge of APWA and AASHTO design standards, County standards and guidelines.
- Advantages related to avoiding, minimizing, or mitigating the utility conflicts on the corridor, including: close working relationships with involved utility and irrigation companies; an understanding of the County's relocation ordinance and utility franchise agreements; valuable experience by assisting the County to develop its utility and residential agreement process.

Scope of Work

To meet the County's objectives, CRS will complete each component of the scope of work below (in accordance with the Request for Proposal, specifically sections B.3. General Scope and B.4. Deliverables).

At notice to proceed, CRS will conduct a project kick-off meeting as well as identify a schedule for meetings and regular communication with the County for the project duration. We anticipate a time when bi-weekly project meetings with the County will be needed. When acquisition begins, we will review the frequency of meetings with agents to keep the project on track and team communication consistent—an approach successful on other County projects.

A. SURVEYING SERVICES

Immediately after the project kickoff meeting, we will lead a "survey success" meeting to review CRS' plan to comply with the County's surveying project requirements. Our survey success meeting will be highly technical based on information from the field and from public survey record.

As an overview, critical surveying elements will include: correct establishment of project control, locating section corner monuments, topography mapping of project extents, locating all observable utilities, and researching and determining the location of existing right of way lines. We will also provide the survey control sheet, provide documentation for acquisition of property within the proposed right of way, and provide the county with additional documents, as needed.

For example, additional documents may include easements and agreements between private irrigation companies/groups and the County for existing facilities.

1) Perform a full project Basemap Survey, consisting of:

a. Topographic Survey

CRS will gather the required topographic elements per the RFP Section B.3.A.1.a. We will evaluate and determine the most effective method of data collection at the "Survey Success" meeting. We will use our experience with LiDAR on 12th Street as a cost versus value to determine if it is useful due to the flat terrain on 2550 South. At a minimum, CRS will use aero-graphics to obtain a new hi-resolution aerial of the project corridor, with or without LiDAR data collection.

Our survey approach is planned to avoid and effectively overcome challenges we've experienced on other similar projects in the area, specifically: extremely flat drainage and irrigation requiring optical survey elevation precisions; areas with intermittent cellular availability thereby limiting VRS coverage; and limited use of aerial topography due to ditch depths, vegetation, and debris.

b. Utility Location Survey

CRS will gather the required utility field information per the RFP Section B.3.A.1.b. Utility surveying will be done concurrently with other topographic field data collection to provide time and cost savings. We have gathered extensive advanced knowledge of the utilities on the project corridor. This will increase efficiency in the field and help to identify undocumented utilities.

Utility documentation will also be researched at Weber County, West Haven City, and with all affected third party utilities. Hard copy records will be used to verify field locations gathered by the surveyors.

CRS will budget for approximately 100 pot holes; and will determine whether potholing will be provided with County resources (for potential cost savings) or by a subcontractor. Field subsurface utility information will be included in the final deliverables and utilized for design.

c. Right of Way Survey & Documentation

CRS has examined many of the subdivision documents and the project cadastral documentation. Approximately 90 individual parcels and 13 recorded subdivisions adjoin the project area. We will further gather, research, and prepare the required right of way information per the RFP Section B.3.A.1.c.

Through research and consultation with the County Surveyor's office, we will carefully monitor prescriptive and ambiguous right of way evidence to accurately determine the existing right of way location. Documentation and evidence of ownership includes but is not limited to: existing Public Land Survey System section monumentation, deeds, previous surveys of adjacent properties, subdivision plats, and tax information.

We have developed an accepted method with Weber County to reconcile any existing gaps and overlaps in the public record that may exist along the corridor.

d. Control Survey

CRS will set the project control as specified in the RFP requirements in Section B.3.A.1.d.i-v, and will be approved by the County Surveyor's office before proceeding with survey tasks or methods. All primary control points will be measured by differential leveling for increased vertical precision.

All monuments for sections within the project limits will be identified as found or not found and reported to the County for their use. The survey control sheet will show and contain: primary and secondary control points; project, state plane, and geodetic coordinates for all control points; and equations for conversion from project coordinates to state plane grid coordinates.

B. DESIGN SERVICES

Utilizing our expertise in WACOG corridor preservation projects, we have studied the corridor numerous times, including an initial AutoCAD drawing and centerline alignment. We have started evaluating the existing roadway elements such as proposed centerline, roadway slopes, side slopes, clear zone, utility infrastructure, and adjoining development; as well as the current and future-planned uses. Through this research, we will identify solutions to widen the corridor while minimizing impacts to residents.

a. Analysis

We will finalize our initial analysis of the corridor designs and roadway characteristics, as well as provide traffic and environmental analyses. We have identified many of the major project challenges to be addressed in the attached *Project Issues Map* (next page).

Traffic Analysis. CRS will quickly employ traffic cameras to determine existing traffic numbers, patterns and required roadway geometrics. We will perform traffic analysis to the depth and sophistication required for geometric design, to satisfy public involvement needs, and for design requirements. Existing corridor speeds will be discussed with the County and, if needed, studied for posting speed. *Consideration will be given to increased use of 2550 South as a more direct route to access I-15 for outlying communities.*

Environmental Analysis. CRS will prepare a concept environmental analysis for County review and approval. Canals and ditches conveying jurisdictional Waters of the United States (those that are connected to a navigable water, i.e. the Great Salt Lake) are located along 2550 South and will be assessed and documented for discussion with the US Army Corp of Engineers (USACE). In addition to a few small, potential wetland areas, a larger salt playa is located on 2550 South at approximately 3400 West.

Our approach will avoid and/or minimize environmental impacts. However, if impacts are necessary, we will work toward documenting impacted wetlands and playa to fit within the Nationwide Permit process. CRS will document any impacts according to USACE standards. Note: canals and ditches are not considered part of this impact, and are only documented in the permit for informational purposes.

Our registered archaeologist and biologist will also survey the corridor for cultural resources and threatened and endangered species, according to USACE requirements. Our initial cultural investigation (review of the West Davis Corridor studies) identified a few historic resources such as the Hooper Canal and some residences. Our research shows that many residences, especially on the south side of the roadway, were built in the historic period (prior to 1967) and appear to have few modifications. We do not expect cultural or historic resources to be an impact on this project.

b. Limited Design

CRS will evaluate the existing parcel boundaries given the County's objective for an 80-foot right of way width. On the east corridor boundary, we will tie the project into the development that has taken place and will account for future development, as well. On the west boundary, we will coordinate with the County and West Haven regarding any future for development at the intersection at 4700 West.

As we evaluate the horizontal and vertical elevation and location of the roadway we will focus on minimizing impacts to adjacent properties, infrastructure, and homes.

We will work to minimize impacts through the incorporation of retaining walls, slopes, and relocation of improvements due to necessary vertical grade changes. From 3850 West to 4150 West, we will look at transitioning the roadway approaches to the crossing over the Wilson Canal, which will allow us to improve sight distance in this section. The same section of road has multiple residential and agricultural accesses. Safety and active transportation, as well as multimodal transportation, will be our primary design criteria.

A unique topographic challenge exists in the corridor since both the east and the west ends of the project are higher in elevation than the middle of the corridor. Existing drainage currently drains to a low point at approximately 3691 West. From this point, water drains generally to the south west through various tail water ditches. Our plan is to perpetuate or improve the current drainage.

Proximity of Homes. Our initial, simple CAD centerline offset for widening revealed a few home takes. We will minimize the overall impact to homes by varying roadway centerline, modifying/ eliminating drainage ditches or swells, or by incorporating retaining walls, where possible. We are in sync with the County's philosophy and goal of zero total project takes.

Rolling Cost Estimate. CRS will develop a rolling cost estimate detailing trending project costs, property values, right of way acquisition, and overall project expense tracking. The estimate will allow the County and CRS to focus project dollars on the most critical project activities.

c. Design Criteria

CRS will initially provide design drawings and documents for the project corridor to a level sufficient for right-of-way acquisition. CRS plans to complete the design and bidding documents upon your authorization. CRS will design this project per RFP requirements 3.B.1.c and to the standards we've provided for other County projects. We will use IGES, Jared Hawes, to perform pavement design and basic geotechnical services.

Clear Zone & Safety. Safety will guide every design determination. As the roadway design is finalized, we will satisfy AASHTO clear zone requirements. This is critical as many violations of the required clear zone space—including drainage ditches, residential improvements, and utility company obstructions—are present in the corridor. We will begin the necessary coordination immediately with utility companies within the clear zone. The County can expect the same precise and deliberate utility coordination and negotiation with the utility and canal companies that they have experienced on our other projects.

Master Plan Consistency. As the right of way and roadway designs are finalized in this and the future design phase(s), we will coordinate closely with the County to correlate with the County's transportation and storm drain master plans. We will specifically focus on the multi-modes of transportation that utilize the corridor, such as agricultural, residential, commercial, and pedestrian/bike (active transportation).

Significant CenturyLink utilities along the corridor

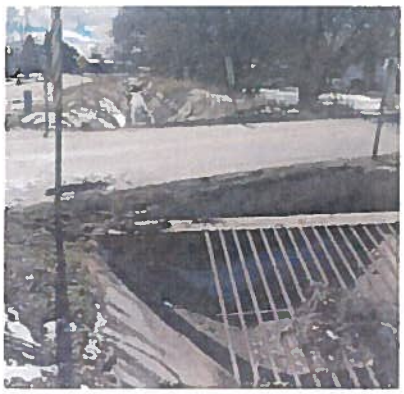
Third Party Utilities Coordination. With our established relationships with all affected utility companies, we have made initial inquiries to develop a thorough and pro-active project approach to benefit the County.

Early in the project we will identify the future location (outside the clear zone) of the Rocky Mountain Power poles that line the entire corridor from east to west.

At the intersection of 4300 West, a Questar high pressure (HP) 8" steel gas line (feeder #105) crosses perpendicular to 2550 South. We will carefully evaluate cuts near the HP gas line to meet Questar/ FERC 36-inch cover requirements. We also have Questar intermediate high pressure (IHP) maps for the corridor and are prepared to address those impacts, as well. Through our research we have learned that Questar prefers to upgrade older steel sections of pipe with HDPE, which exist along this corridor. We will show Questar's upgrades in our design.

At 4629 West, CenturyLink has a cross box, DSL Cabinet, pedestal or power meter, manhole, and a pair gain unit. The infrastructure at this location is difficult and costly for CenturyLink to replace, often requiring long lead time. Replacement facilities require extensive fiber optic equipment and overall systems upgrades, driving the replacement cost and overall project schedule. Coordination with Weber Basin Water Conservancy District and Taylor West Weber Water will take

place to identify and minimize facility impacts to their systems. CRS will also monitor any facilities owned by West Haven that are near or in the project corridor.



CRS will address important improvements around open canals and ditches

Irrigation Company Coordination. Our team will coordinate with Hooper Irrigation Company and the Wilson Irrigation Company related to impacts and will also evaluate associated prescriptive and real property rights that exist. Due to canal company water year requirements, timing and sequencing of impacts to canal facilities are critical to the project schedule.

A Hooper Irrigation canal box culvert that crosses under the road at approximately 3381 West will need to be widened to accommodate future roadway width.

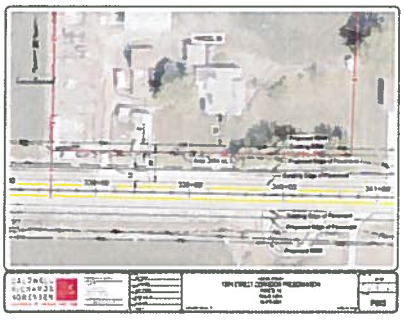
A Wilson Irrigation Company irrigation ditch crosses 2550 South at approximately 4030 West. This particular crossing is currently very narrow, and the existing bridge appears to need widening, structural, and other safety improvements.

In addition to the known canal companies, an unnamed ditch flows south towards 2550 South just west of the Hooper Irrigation Ditch crossing. At approximately 3230 West the unnamed drainage collection ditch abuts 2550 South. From this point the ditch parallels 2550 westward to 3662 West. This ditch captures both tail water as well as groundwater in the area and conveys it towards the Hooper Slough. This ditch will be accounted for in our roadway design as well as adjoining agricultural use by farmers in the area.

There is an unnamed canal that crosses 4300 West just north of 2550 South. At approximately 4366 West this canal transitions from an open canal to a piped facility. Our design team will be vigilant to investigate and give consideration to these facilities in regards to our vertical design.

d. Project Team Meetings

CRS will comply with the RFP requirements in 3.B.1.d and will partner with FrontLine Public Involvement on this project. We are prepared to increase the frequency of County and CRS team meetings based on the activity and requirements of the project for communication and decisions.



CRS will produce maps for ROW acquisition and negotiation efforts

In preparation for individual meetings with property owners we will create an exhibit of each parcel that needs to be acquired, that reflects existing conditions vs the proposed design improvements. On the 12th Street project, these exhibits helped immensely for the property owner to see the contrast between their current property condition versus the proposed changes (left).

Public Involvement. Our goal with residents and the community is to solicit feedback and then begin visiting with each resident individually. We envision one public meeting prior to in-home visits and one directly after all the home visits are completed, if needed. The project corridor carries heavy commuter traffic through the heart of residential and agricultural areas and is increasingly in demand as development increases.

Our team will carefully work with all stakeholders and residents along the project corridor to find amicable solutions for the right of way expansion. We are aware that a key County employee is a resident on this corridor, with whom we have a positive working relationship. This relationship, along with others we develop, will be fostered to facilitate the overall success of the project. We will carefully work with all residents along the project corridor.

e. Site Visits

CRS will comply with the RFP requirements in 3.B.1.e and has made numerous site visits. Our project team is within 20 minutes of the project site and the County offices. Site visits will be made as often as needed during the design process to solve project issues in-person. At the onset of the project, we will video the site, allowing project footage to be viewed multiple times in an effort to reduce some visits and cost. The site video will be made available to the County.

f. Right of Way Acquisition

CRS will comply with RFP requirements 3.B.1.f and will work closely with the County's selected right of way acquisition agent(s). During 12th Street and other WACOG projects, we found great value in weekly meetings with the ROW agents once the acquisition process began. Regular meetings help the design, acquisition, and County team stay on task, prioritize, and resolve concerns and issues as they arise.

Working positively with residents is key to the overall acquisition strategy. As mentioned above, it is our understanding that until construction funds are available, land acquisition will be on a willing seller/willing buyer basis. A team prioritization list and process will help to keep the process streamlined without wasting time on difficult residents. CRS will assist with, or develop, the prioritization list and process, as directed by the County.

Transparent, Real-Time Collaboration and Document Management. On past WACOG projects, CRS has used a combination of Excel, Dropbox, Egnyte and ePM to track progress and collaborate among project team members. For this project, we are currently exploring, with the County, the use of Flairdocs software, which appears to consolidate these many file storage and distribution methods. We anticipate Flairdocs may also allow for contracts to be modified in real-time as negotiations take place with residents. CRS will work with any document management system or process as directed by the County.

Deliverables

A. DRAWINGS AND ELECTRONIC FILES

1) Provide an electronic file collaboration site for project files and deliverables.

CRS will use Egnyte and other technologies to give the County full access, at any time, to project documents and data from any internet connection.

In addition to survey and right of way acquisition deliverables below, CRS will deliver an AutoCad file of the roadway design and a rolling cost estimate to the County to utilize as construction funding becomes available for final design documents.

2) Provide location of permanent project benchmarks and traverse points (description, coordinates, and elevations).

This deliverable will be provided to the County as specified in the RFP and as discussed above in the scope of work, item A.1.d, Control Survey.

3) Provide topographic map plot at a scale of 1-inch=100-feet, depicting all surface features, legible text (leadered in if necessary), and 1-foot contour lines indexed at even 5-foot intervals.

The design alternatives will be prepared showing all topography lines at the scale and intervals specified. This final product will be delivered to the County as a hard copy.

4) Provide digital ASCII file of all points in (Point number, Northing, Easting, Elevation, Description) format.

All data collected for the project will compiled in an ASCII format and delivered to the County.

B. ACQUISITION PACKAGE FOR EACH PROPERTY OWNER

1) Right of Way Map covering the parcels that need to be acquired

Following the completion of the design, we will create a right of way map associated with each parcel to be acquired along the corridor. This map will show the existing and proposed right of

on each subject ownership. way lines for each affected property, the owner's information, distances, and other applicable information for each parcel. CRS will provide the requested 11x17 right of way and property acquistion maps. As an added benefit, CRS will provide 8.5x11 residential snapshot maps for property owner visits.

2) Deeds and/or Easements ready for acquisition. CRS will prepare the acquisition documents as required for WACOG funded projects by completing partial summaries, including the standard documents—summary, ownership, vesting, signature deed, deed plot, and right of way map documents.

CRS will prepare and quality control check the right of way documents internally and upload them to Egnyte and/or ePM/Flairdocs for the County's review. This allows the County the assurance that residents will be presented with the correct documents by the acquisition agent.

Specific Exclusions / Assumptions

Exclusions and assumptions are identified with our cost proposal *(see section E. Unit Rate Evaluation)*.

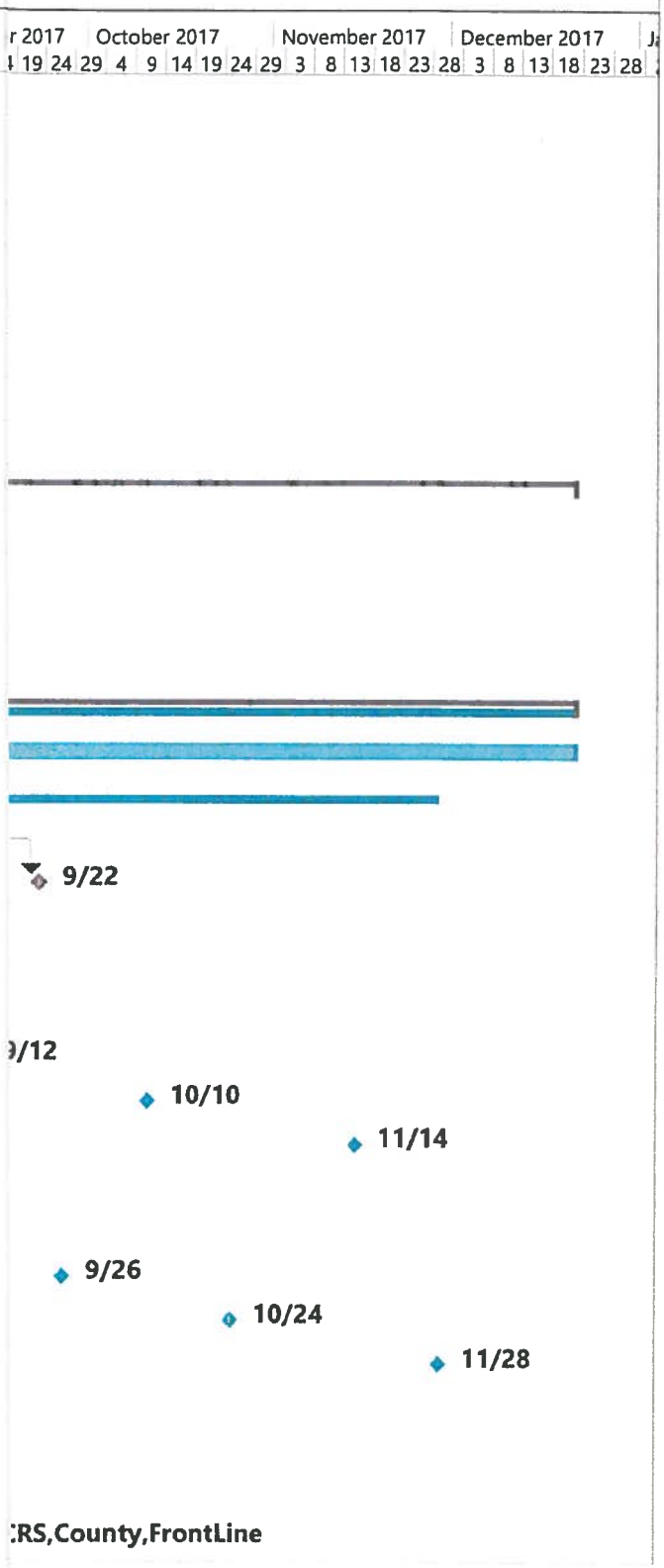
Proposed Project Schedule

Key project milestones are provided below. For a detailed schedule of all project tasks and deliverables, please refer to the attached *Project Schedule* (next page).

Notice of Award	March 27, 2017	**Team and ROW Meetings**	July 11, 2017 – November 28, 2017
Kickoff	March 31, 2017	**Residential Visits Complete**	September 12, 2017
Survey Complete	May 12, 2017	**Public Meeting #2**	September 22, 2017
Limited Design Complete	June 2, 2017	**ROW Packages Complete**	December 21, 2017
Public Meeting #1	June 5, 2017		

CRS ENGINEERS
Answers to Infrastructure®

ID	Task Name
1	Notice of Award
2	Kickoff Meeting
3	**Surveying Services**
4	Survey Success Meeting
5	Topographic Survey
6	Aerial | LiDAR (TBD)
7	Utility Location Survey
8	Right of Way Survey
9	Control Survey
10	**Design Services**
11	Analysis
12	Limited Design
13	**Design Criteria**
14	Traffic Analysis
15	**Acquisition Package**
16	Partial Summary Preparation and Submittal
17	**Project Team Meetings**
18	Public Meeting 1
19	Public Meeting 2
20	Survey Progress Conference Call Bi-Weekly
21	Team Meeting 1 - In Person
22	Team Meeting 2 - In Person
23	Team Meeting 3 - In Person
24	Team Meeting 4 - In Person
25	Team Meeting 5 - In Person
26	Row Meeting 1 - In Person
27	Row Meeting 2 - In Person
28	Row Meeting 3 - In Person
29	Row Meeting 4 - In Person
30	Row Meeting 5 - In Person
31	**Site Visits**
32	Initial w/ Video
33	Utility On-Site Meet
34	Team Residental Visits



C. Qualifications / Experience

C. QUALIFICATIONS/EXPERIENCE

CRS Engineers is a full-service, Utah-based civil engineering firm established in 1905. This project will be managed from our local, Farmington office. Firm-wide, we offer the resources of over 55 professionals.

CRS has completed numerous, similar projects. Projects representative of our ROW experience (ongoing or within the past 4 years) are outlined below. References are included in the *Appendices (Attachment B)*.

Right of Way Acquisition: 178 Parcels
Design Fee: $3.9M

Weber County 12th Street Reconstruction – Segment 1, 3, & 4, Weber County, UT

CRS is the prime consultant working with Weber County to widen 6.5 miles of 1200 South from 66' to 100'. Along the roadway, CRS provided extensive coordination with the County, public, and private property owners. ROW engineering, acquisition support, and overall management was provided in accordance with WACOG and County ROW procedures.

Team Involvement: M. Hirst (Proj. Mgr.), G. Myers (Dep. Proj. Mgr.), M. Porter (Design), B. Williams (Design), S. Collier (Survey/ROW), C. Nelson (Traffic/Utilities), C. Easton (Environmental), M. Asay (Public Inv.), J. Hawes (Geotechnical)

Relevancy to Weber County 2550 South:

- WACOG Funding/Process
- ROW Design/Acquisition (WACOG/UDOT)
- Utility Relocation/Agreements
- Public Involvement
- Environmental Requirements
- Design for Safety/Multi-mode Transportation
- Optimized Design to Minimize Corridor Impacts

Right of Way Acquisition: 60 Parcels
Design Fee: $540K

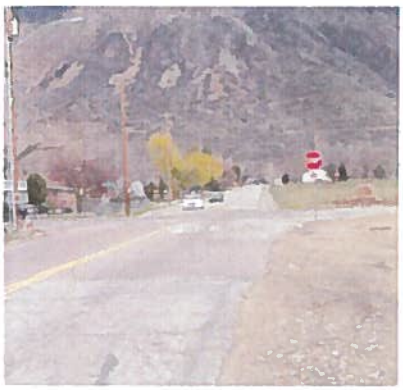
Ogden 17th Street Roadway Improvements, Ogden, UT

CRS is completing design on 17th Street from Wall Avenue to the Marriott-Slaterville border. Several parcels were affected with ROW acquisition and easements. Design includes drainage, utility relocation, and two railroad crossings with necessary permitting. A UDOT signal is also being relocated with an acceleration/deceleration lane.

Team Involvement: C. Nelson (Design Lead), G. Myers (ROW Support), B. Williams (Design/ROW QC), S. Collier (Survey/ROW), M. Asay (Public Inv.)

Relevancy to Weber County 2550 South:

- WACOG Funding/Process
- ROW Design/Acquisition (WACOG/UDOT)
- Utility Relocation/Agreements
- Public Involvement
- Design for Safety/Multi-mode Transportation
- Optimized Design to Minimize Corridor Impacts



Right of Way Acquisition: 8 Parcels
Design Fee: $205K

Ogden North Street, Ogden, UT

CRS provided design for a half mile of roadway reconstruction from Washington Blvd. to Monroe Blvd. Work included designing curb, gutter, and sidewalk in several places. A turn lane was added from North Street onto Washington Blvd on the west side of the project. A signal was also designed at the east boundary of the project on Monroe Street.

Team Involvement: C. Nelson (Design Lead), B. Williams (Design/ROW QC), S. Collier (Survey/ROW), M. Asay (Public Inv.)

Relevancy to Weber County 2550 South:

- WACOG Funding/Process
- ROW Design/Acquisition (WACOG/UDOT)
- Utility Relocation/Agreements
- Public Involvement
- Design for Safety/Multi-mode Transportation
- Optimized Design to Minimize Corridor Impacts

Right of Way Acquisition: 6 Parcels
Design Fee: $130K

Ogden 20th Street Roadway Improvements, Ogden, UT

The complete roadway reconstruction included acquiring ROW and two signal designs—one at Grant Avenue and one at Washington Avenue. Upgrades to existing utilities included storm drain, sewer, and adjustments to water valves.

CRS coordinated with individual property owners, providing specialized property restoration and other needs. The project also included tie-ins to existing utilities on Grant Ave. and Wall Ave. as well as safety considerations for a school.

Team Involvement: G. Myers (Design Lead), M. Porter (Design), B. Williams (Design QC), S. Collier (Survey/ROW), C. Nelson (Traffic/Utilities)

Relevancy to Weber County 2550 South:

- WACOG Funding/Process
- ROW Design/Acquisition (WACOG/UDOT)
- Utility Relocation/Agreements
- Public Involvement
- Design for Safety/Multi-mode Transportation

Right of Way Acquisition: 12 Parcels
Design Fee: $125K

UDOT Fort Union Blvd & Highland Drive Intersection, Salt Lake City UT

CRS is completing the signal and utility design for the intersection of Fort Union and Highland Drive in Salt Lake City. Due to the traffic volume, dual left turn lanes will be added to each leg of the intersection.

Several properties were affected with acquisition and construction easements. Proximity of buildings to the right of way required exact, precise ROW survey and design. CRS worked with Rocky Mountain Power to move perpetual easements for large transmission lines through the project.

Team Involvement: M. Hirst (Principal), G. Myers (Proj. Mgr./Design Lead), M. Porter (Design QC), B. Williams (Utilities), S. Collier (Survey/ROW), C. Nelson (Traffic)

Relevancy to Weber County 2550 South:

- ROW Design/Acquisition (UDOT)
- Utility Relocation/Agreements
- Public Involvement
- Design for Safety/Multi-mode Transportation

Right of Way Acquisition: 7 Parcels
Design Fee: $600K

Pony Express Parkway, Saratoga Springs and Eagle Mountain, UT

Current contracts include the design and ROW acquisition for widening two miles of roadway from two 12' lanes to 5 lanes with shoulders. Safety is being improved with clear zones and the addition of a trail along the road for bikers and pedestrians.

Two traffic signals were added for current demand and future growth. Structural improvements included a box culvert extension and 72" RCP extension. CRS also provided environmental documentation required for the project.

Team Involvement: M. Hirst (Principal), G. Myers (Proj. Mgr.), M. Porter (Design QC), B. Williams (Design Lead), S. Collier (Survey/ROW), C. Nelson (Traffic), C. Easton (Environmental)

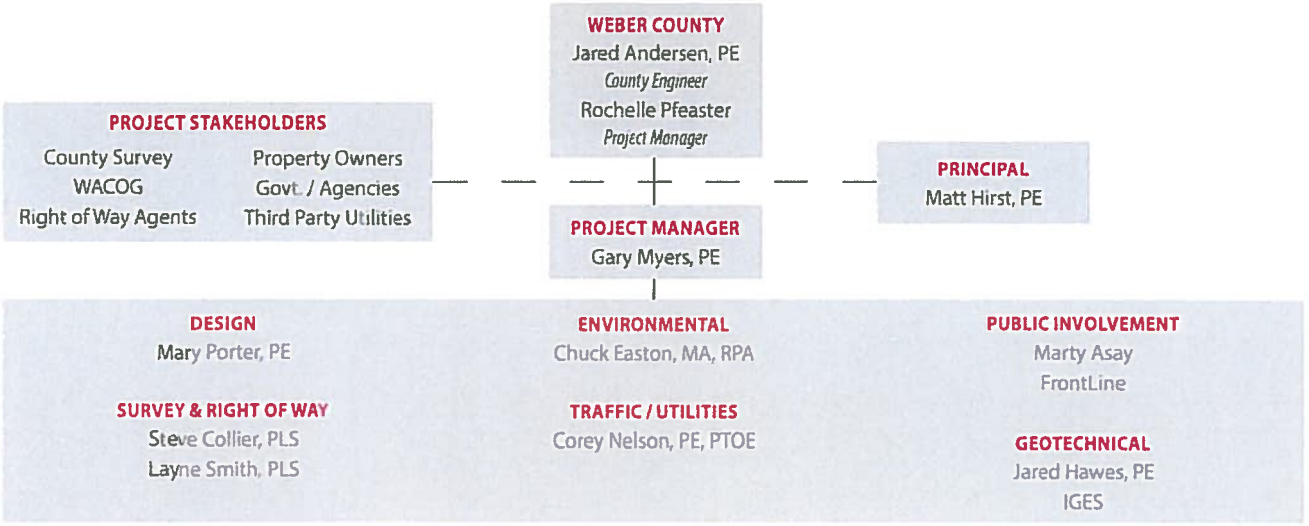
Relevancy to Weber County 2550 South:

- UDOT ROW Design/Acquisition
- Utility Relocation/Agreements
- Public Involvement
- Environmental Requirements
- Design for Safety/Multi-mode Transportation

D. Key Personnel and Project Team

D. KEY PERSONNEL AND PROJECT TEAM

CRS offers the experienced team and resources to accomplish the County's objectives (as indicated in the RFP, specific project involvement for each individual is identified in section *C. Qualifications/Experience*. The percent involvement of each key team member is included in section *E. Unit Rate Evaluation*. All work (100%) will be performed locally, primarily from our nearby location in Farmington, Utah. Resumes of key personnel are included in the Appendices.



MATT HIRST, PE - Principal
23 Years Experience
B.S., M.S. Civil Engineering

As Principal, Matt will oversee and manage the comprehensive scope of services to successfully accomplish the project. Matt brings extensive ROW project experience and local knowledge of Weber County process.

Matt has been trusted by the County as Project Manager for some of the County's largest projects, including Weber County's 12th Street corridor project and overseeing CRS' Weber River EWP construction administration services. Through previous work in Weber County he has developed strategic relationships with key stakeholders including irrigation companies, utility companies including Weber Basin Water Conservancy District, Rocky Mountain Power, Questar, and Century Link. He is intimately familiar with WACOG funding, and has spent extensive time with residents in the area—he knows the challenges that will be important for the success of this corridor preservation.

GARY MYERS, PE - Project Manager
15 Years Experience
B.S. Civil Engineering

Gary will manage the project team, ensure quality, allocate resources, provide coordination with government agencies, utilities, and stakeholders. He will work with the County to meet schedule, scope and budget. He will also coordinate public involvement including presentations, progress meetings and will attend meetings with property owners, as needed.

In addition to corridor preservation experience, Gary brings the benefit of leading the design for recent WACOG funded transportation projects, positive working relationships with County personnel, and an understanding of County process and requirements. He also understands the unique needs of the project stakeholders on this corridor—a rural community with the pressures of urban growth and demands. Established relationships with utility companies will also streamline the project. His many years of relevant right-of-way development experience ranges from creation of the acquisition documents and supporting negotiation with property owners, to involvement in public meetings and assisting with ROW negotiation.

MARY PORTER, PE - Design Lead
12 Years Experience
B.S. Civil Engineering

As the Design Lead, Mary will collaborate with the ROW team to develop the needed ROW and supporting ROW design/development. She will provide conceptual designs and calculations to derive cut/fill lines establishing ROW acquisition.

Her skills and knowledge have been developed from several transportation and ROW projects along the Wasatch Front. Her design experience includes several projects throughout Weber County that involved multiple ROW parcels.

Mary is familiar with WACOG funded projects as well as Weber County procedures and will assimilate into the project quickly as she has provided the geometrics for the redesign of Weber County's 12th Street Roadway Reconstruction project.

She has also provided design for the Ogden City 20th Street Roadway Improvement project which included WACOG funds and ROW acquisition.

STEVE COLLIER, PLS - Survey/ ROW Lead
5 Years Experience
A.A.S. Surveying and Geomatics / A.A.S. Pre-Engineering

Steve will lead all surveying and production of the partial summary packets. He has become an expert with UDOT's right of way delivery process, having delivered over 250 parcels on UDOT and WACOG projects.

Experienced as a PLS, and as former survey crew chief, Steve offers the proven experience to manage, direct, and prepare accurate ROW instruments for Weber County. His previous experience and knowledge of Weber County from previous projects will aid in providing accurate, timely information to the design team and the County.

Specific WACOG funded projects include Weber County's 12th Street Roadway Redesign (178 ROW parcels), Ogden 20th Street Roadway Improvements, Ogden 17th Street Roadway Improvements, and Ogden North Street Roadway Improvements.

LAYNE SMITH, PLS - Survey/ROW QC
25 Years Experience
B.S. Geography

Layne will provide quality control review for all surveying maps and review of partial summary packets. His proven experience as a PLS and survey manager over ROW development gives Layne the ability to provide quality control that will deliver the design team and Weber County accurate and timely ROW instruments.

One of the more experienced Surveyors in the industry, Layne has the ability to calmly, professionally, and deliberately approach complex projects and stakeholders. Layne has vast experience researching complex boundary issues and working with engineers on corridor projects for rights of way. Layne was the lead surveyor/right of way designer with acquisition support responsibilities on 1700 South (0.75-mile corridor in Logan), preparing conveyance documents, easements and temporary construction documents. On 200 West (a 1-mile corridor in North Logan), Layne worked closely with designers to optimize the project alignment while carefully coordinating with residents to communicate and mitigate impacts to private property. Layne understands the art of coordinating the needs of transportation corridor projects with residential and other adjacent property owners.

Layne has been materially participating on Weber County's 12th Street as ROW QC (WACOG) in the final residential negotiation, supporting Steve Collier.

COREY NELSON, PE, PTOE - Traffic/ Utilities Lead
10 Years Experience
B.S. Civil Engineering

Corey will provide traffic analysis and utility design and coordination with the various utility companies.

Corey's utility expertise is recognized by industry colleagues and will be a strategic benefit for this project as he currently serves in an on-call contract with UDOT to direct utility coordination with Rocky Mountain Power. As a PTOE, he specializes in traffic studies utilizing industry standards and procedures. He uses Synchro to model existing traffic patterns to develop alternatives to proposed designs.

Corey has completed utility and traffic analysis and design for numerous transportation projects along the Wasatch Front and in Weber County. He has the knowledge and working relationships with utility companies to coordinate and develop designs that will meet the County's future demands and safety needs and traffic analysis will provide options the County needs to move traffic as growth continues along the corridor.

CHUCK EASTON, MA, RPA - Environmental Lead
19 Years Experience
B.S. Anthropology, M.A. Ancient Studies

As Environmental Lead, Chuck will provide cultural, wildlife, and wetland documentation needed for potential permitting along the corridor. Chuck will provide required documentation for the nationwide permits required for roads that fall under ½ acre impact. He will study the several fill ditches along the corridor as well as deep ditches located along the north side of the corridor.

Chuck's work on the Wasatch Front, and more particularly in Weber County, specifically provides direct knowledge of the environmental concerns in the area as well as the necessary permitting needs of the County. While working for UDOT, Chuck provided the environmental assessment for the area from 21st to 33rd (Hinckley Road) from 1900 West to the Viaduct. He is intimately familiar with environmental issues in the area.

Another benefit: Chuck has performed multiple historic building surveys, archaeological surveys, and wetlands documentation on many projects. Several homes within the corridor area were built historically and may require documentation and cataloging of items.

MARTY ASAY - Public Involvement
15 Years Experience
B.S. Communication

Marty will lead the public involvement effort. His public involvement experience includes all phases of project development through environmental and construction.

Marty managed public involvement on the 12th Street Rebuild Phase 1, 3500 West Reconstruction, the US-89; Harrison Blvd Intersection Improvement project, Riverdale Road Rebuild Phase 4, Wall Avenue Pavement Rehabilitation, Washington Blvd. Dowel Bar Retrofit and the downtown improvements on Washington Blvd.

He has worked with CRS on numerous right of way design projects which required extensive public involvement strategies and activities. He has demonstrated experience with all public involvement tools and is always on the leading edge of technological advancements in communications.

In addition to the full staff and resources at CRS Engineers and FrontLine, team resources for the project include the geotechnical engineering through IGES, led by **Jared Hawes, PE.**

E. Unit Rate Evaluation

E. UNIT RATE EVALUATION

COST PROPOSAL

Bidder Name: CRS Consulting Engineers Incorporated

1. List the name, job title and hourly rate for any proposed personnel. Also include the approximate percentage of project to be performed by each person:

Name:	Matt Hirst	**Title:**	Principal	$	160	/hour	3	%
Name:	Gary Myers	**Title:**	Project Manager	$	120	/hour	5	%
Name:	Chuck Easton	**Title:**	Environmental Lead	$	145	/hour	3	%
Name:	Mary Porter	**Title:**	Design Lead	$	110	/hour	15	%
Name:	Corey Nelson	**Title:**	Traffic/Utilities Lead	$	100	/hour	5	%
Name:	Steve Collier	**Title:**	Survey & ROW Lead	$	95	/hour	35	%
Name:	Layne Smith	**Title:**	Survey & ROW QC	$	110	/hour	3	%
Name:	Field Surveying	**Title:**	Survey Crews	$	130	/hour	3	%
Name:	Staff Engineering	**Title:**	Staff Engineering	$	85	/hour	30	%

Total Average $/hour: 99.30

2. Provide expected reimbursable expenses and rates associated to them. Specify if the rate is hourly, daily, etc.

Expense:	Misc. Reimbursables	$	5,000.00	Estimated
Expense:	Potholing (if outsourced)	$	800.00	Each hole
Expense:	Public Involvement - FrontLine (Marty Asay)	$	100.00	Hourly
Expense:	Geotechnical - IGES (Jared Hawes)	$	5,000.00	Lump Sum
Expense:	Aerographics - Aerial Image (Digital)	$	10,000.00	Estimated

Notes/Assumptions:

1. Mileage and misc. reimbursables will be billed on a time and materials basis, trips to visit residents are variable (thus the estimated).
2. Design will be developed to 100% design roadway footprint. We do not anticipate sheets, notes, specifications or other engineering documentation at this phase.
3. We have not scoped drainage memos as part of the design fees.
4. CRS will review and assist the County with ROW and/or Utility Agreements on the corridor.
5. Fee estimates one visit per resident, 2 public open houses, 5 County work sessions, 5 ROW meetings. Additional meetings beyond the RFP requirements will be addressed during contracting.

(Any deviation from this format may result in disqualification of proposal)

F. Appendices

ATTACHMENT A
RESPONDENT QUESTIONNAIRE

1. **Respondent Information:** Provide the following information about yourself and your company.

Respondent Name: CRS Consulting Engineers Incorporated
(Note: give exact legal name as it will appear on the contract, if awarded.)

Address: 160 South Main Street, Ste. 200, PO Box 280

City: Farmington State: UT Zip Code: 84025

Telephone No: (801) 359-5565 Fax No: (801)359-4272

Business Structure:

☐ Individual or Sole Proprietorship

☐ Partnership

☒ Corporation

☐ Other; list business structure: _____

2. **Contact information:** List the one person who Weber County or their representative may contact concerning your proposal.

Name: Matt Hirst, PE

Address: 160 South Main, Ste. 200, PO Box 280

City: Farmington State: UT Zip Code: 84025

Telephone No: (801) 558-6251 Fax No: (801)359-4272

Email: matt.hirst@crsengineers.com

3. **References:** Give names of three people with whom you have worked on past projects of similar nature.

a. Name: Justin Anderson, PE, City Engineer - Ogden City

Address: 2549 Washington Blvd., Ste. 761

City: Ogden State: UT Zip Code: 84401

Telephone No: (801) 629-8980 Fax No: _____

Email: justinanderson@ci.ogden.ut.us

b. Name: Brett Slater, PE, Project Manager - UDOT Region 1

Address: 166 Southwell Street

City: Ogden State: UT Zip Code: 84404

Telephone No: (801) 620-1689 Fax No: _____

Email: brettslater@utah.gov

c. Name: Andy Thompson, PE, City Engineer - Kaysville City

Address: 23 E. Center Street

City: Kaysville State: UT Zip Code: 84037

Telephone No: (801) 546-1241 Fax No: _____

Email: athompson@kaysvillecity.com

ATTACHMENT B
CONFLICT OF INTEREST – DISCLOSURE STATEMENT
Weber County
2380 Washington Blvd.
Ogden, Utah 84401

Name of Proposer: CRS Consulting Engineers Incorporated

Name of Project: Surveying and Design Services for 2550 South

Stakeholders – Weber County, any affected land owners

Does Proposer, or any of Proposer's employees, have any relationship or bias towards or against any stakeholder, developer, contractor or subcontractor, have any relationship or bias that may create the perception of bias, or have any other conflict of interest or potential conflict of interest?

☐ **YES** (Myself or an employee, or member of my or employee's immediate family, has a material, personal, or financial interest in or fiduciary relationship to the stakeholder, developer, general contractor or subcontractor.) *(Please use a separate form for each individual with a conflict or potential conflict, and complete all applicable portions of the form. Attach additional sheets as needed.)*

☒ **NO** (Neither I nor any employee, or member of my or employee's immediate family, has a material, personal, or financial interest in or fiduciary relationship to any stakeholder, developer, general contractor or subcontractor. Also, no other relationship with or bias towards any stakeholder, developer, general contractor or subcontractor exists which will prevent me (Proposer) from submitting a non-biased bid/proposal.) *(Please complete the Signature section below.)*

Related-Party Transactions or Independent Judgment Impaired

Name and position or title of individual with Conflict of Interest

Individual associated with Proposer: _____

Other party: _____

Individual associated with other party: _____

Relationship between identified individuals: _____

Description of transaction involving identified individuals and dollar amount (if any): _____

_____

Decision-making authority of individuals with respect to that transaction: _____

_____

Potential effect on this Contract with Weber County: _____

_____

Signature

I hereby certify that the information I have given is true and complete to the best of my knowledge.

Name and Title of Person Completing Form (please print): Matt Hirst, PE

President

Signature: _____

Date: 3-8-17

Weber County reserves the right to make the sole determination of the appropriateness of the Proposer. Failure to disclose real or perceived conflicts of interest may result in Proposer's proposal/bid to be deemed non-responsive or contract to be voided.

Matt Hirst, PE
Principal

Education
M.S., Civil Engineering
University of Utah, 2007

B.S., Civil Engineering
University of Utah, 1999

Registrations
Registered Professional Engineer: Utah, Arizona, Colorado, Idaho, Kansas, Missouri, and Texas

Affiliations
ASCE- American Society of Civil Engineers

ACEC- American Council of Engineering Companies
President: 2016-Current
Board Member: 2012-Current

Contact Information
2060 E. 2100 S.
Salt Lake City, UT 84109
Office: 801.359.5565
Cell: 801.558.6251
matt.hirst@crsengineers.com

crsengineers.com

Matt brings over 22 years of experience to CRS Engineers. He has extensive experience in large and complex project management and preconstruction engineering, specifically in transportation, roadways, and utilities.

He has extensive experience in roadway and utility design on both large and small scale projects, such as UDOT's Access Utah County Program, I-15 CORE, Legacy Parkway and Weber County's multi-phase and complex 12th Street project.

Representative Experience

- Weber County 12th Street Reconstruction Design & Construction (WACOG), Weber County, UT – Current: Project Manager
- UDOT Mountain View Corridor – Phase 0, 1 Utah County Segment, Utah County, UT – Current: Utility Lead
- Logan North Valley Landfill and Access Road – Cache County Review & Compliance
- UDOT Park Lane at Clark Lane and 1100 West, Farmington, UT
- UDOT Fort Union Blvd. & Highland Drive Intersection, Cottonwood Heights, UT with Mott MacDonald
- UDOT Farmington City Station Parkway Road, Farmington, UT
- UDOT Pony Express Parkway Improvements, Saratoga Springs, UT
- UDOT US-89 (Washington Blvd) & 26th Street, Ogden, UT
- UDOT Farmington Park Lane Signal Upgrades, Farmington, UT
- Salt Lake City 4 New Traffic Signals, 4 Camera Installations, and 5 HAWK Pedestrian Signals, Salt Lake City, UT
- UDOT Rendezvous Park Pedestrian Crossing, Logan, UT
- UDOT 200 North: 900 West to Flint Street, Kaysville, UT
- UTSSD County Wide Chipseal & Paint, Vernal, UT
- Weber & Cache County Emergency Watershed Protection Program (EWP), Weber County & Cache County, UT
- UDOT I-15 South Davis County Design-Build, Davis County, UT with WSP/Parsons Brinkerhoff
- UDOT I-15 CORE Design-Build Team, Utah County, UT
- UDOT D&RG Rail Trail; Centerville to Farmington, Farmington/ Centerville, UT
- UDOT US-491; Monticello Port of Entry, Monticello, UT
- UDOT Mapleton Railroad Crossing, Mapleton, UT
- UDOT West Bountiful D&RG Trail Design, West Bountiful, UT
- UDOT Access Utah County Program Management for SR-77, Pioneer Crossing, and Vineyard Connector, Utah County, UT with HDR
- UDOT Legacy Parkway Design-Bid-Build, Davis/Salt Lake County, UT with HDR
- UDOT Legacy Parkway Design-Build Phase, Davis/Salt Lake County, UT with Parsons Brinkerhoff
- UDOT East-West Connections EIS with HDR, Utah County, UT
- UDOT Vineyard Connector EIS with HDR, Utah County, UT
- UDOT Parrish Lane UTA/UPRR Bridge Replacement Design with HDR, Centerville, UT
- UDOT Parrish Lane over I-15 Bridge Widening CE, Centerville, UT
- UPRR Pavement Asset System, System Wide

Gary Myers, PE
Manager, Transportation

Education
B.S., Civil Engineering
Utah State University, 2004

Registrations
Registered Professional Engineer:
Utah

Affiliations
Institute of Transportation Engineers (ITE)
ASCE Member, Utah State University Student Chapter

Skills and Design
Microstation and Inroads Modules
AutoCAD and Civil Design
Deed Plotters & Legal Aid
Proficient in all UDOT Design & Utilities & ROW Standards
UDOT CEMT Certified

Contact Information
160 South Main, Suite 200
P.O. Box 280
Farmington, UT 84025
Office: 801.359.5565
Cell: 801.599.7476
gary.myers@crsengineers.com

crsengineers.com

Gary leads the transportation group is highly skilled in large and small transportation corridor delivery. With over 15 years of experience delivering DOT, County, and City transportation, he is a leader in design and construction engineering.

In addition to transportation project delivery, Gary has extensive experience with other municipal engineering services such as plat and plan review, development review, capital improvement projects, rail crossings, traffic signal design, construction engineering, multi-use trail design, right-of-way acquisition, and project cost estimating. Gary understands federal, state and local requirements.

Gary is a certified Construction Engineering Resident Engineer for UDOT, employing constructability skills on his design projects. On DOT and local government projects Gary has been performing project inspection, monitoring and evaluation to ensure quality control and workmanship. He has been involved on projects from the beginning in the design phase all the way through the construction, including working patiently and carefully with project stakeholders to find win-win solutions.

Experience

- Weber County 12th Street Reconstruction Design (WACOG), Weber County, UT – Deputy Project Manager – ROW
- Ogden City 17th Street Roadway Improvements (WACOG), Ogden, UT
- Ogden City 20th Street Signal Design(WACOG); Ogden, UT
- UDOT Fort Union Blvd & Highland Drive Intersection; Cottonwood Heights, UT
- UDOT Pony Express Parkway Expansion Phase 2 Engineering Design; Saratoga Springs, UT
- UDOT Kaysville 200 North Preconstruction Engineering; Kaysville, UT
- UDOT Logan Canyon Gateway Trail, Phase I; Logan UT
- UDOT SR-39; MP 8.9 – 35.00; Weber County, UT
- Kaysville 200 North and Flint Street Signal Warrant; Kaysville, UT
- UDOT Park Lane and Clark Lane Road Design; Farmington, UT
- UDOT Farmington D&RGW Trail; Farmington, UT
- UDOT Emergency Flooding Repair, Old Snowbasin Road 226; Weber County, UT
- Kaysville 400 West Traffic Study; Kaysville, UT
- Barnes Drive Traffic Counts; Kaysville, UT
- Northwood Traffic Study; North Salt Lake, UT
- 700 North State Street Arterial Street Construction; Lindon, UT*
- Redwood Road Mobility and Beautification Enhancement Phase 2; Taylorsville, UT*
- Syracuse Emigrant Trail Underpass Construction Management; Syracuse, UT*
- US-89, State Street Safety Improvements, Phase I; Provo, UT*
- Lindon Heritage Trail Design and Construction; Lindon, UT*

**Previous Employment*

Mary Porter, PE
Project Engineer

Education
B.S. Civil Engineering
Brigham Young University, 2002

Registrations
Registered Professional Engineer:
Utah

Skills and Design
Microstation and Inroads Modules
AutoCAD and Civil Design
Deed Plotters & Legal Aid
Proficient in all UDOT Design &
Utilities & ROW Standards
UDOT CEMT Certified

Contact Information
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mary.porter@crsengineers.com

crsengineers.com

Mary has a variety of engineering experience in her 12-year career from roadway design, drainage, right of way, utilities, signals, trails, and construction. She has extensive knowledge in the current UDOT standards as well as city standards for many different municipalities and all federal guidelines and manuals. Mary has 5 years of experience in the construction field as a resident engineer on UDOT projects. In addition to working with UDOT on construction projects, she has also supported many municipal construction projects.

Mary's overall knowledge of transportation projects help to bring cohesiveness and cost effective solutions to clients.

Representative Experience

- Weber County 12th Street Reconstruction Design & Construction (WACOG), Weber County, UT – Current: Lead Engineer
- Ogden 20th Street Roadway Improvements (WACOG), Ogden, UT
- UDOT Fort Union Blvd. & Highland Drive Intersection, Cottonwood Heights, UT
- UDOT 200 North: 900 West to Flint Street, Kaysville, UT
- UDOT Pony Express Parkway Improvements, Saratoga Springs, UT
- UDOT Park Lane at Clark Lane and 1100 West, Farmington, UT
- UDOT Emergency Flooding Repair, Old Snowbasin Road, Weber County
- 7000 South At-grade Rail Crossing
- UDOT & West Point Trail Resident Engineer, West Point, UT
- UDOT Consultant Field Engineer: SR-39; Various Locations
- UDOT Consultant Resident Engineer, Clinton 2000 West, 1300 North to 2300 North, Clinton, UT*
- Ogden City Consultant Field Engineer; 23rd Street Sewer Line, Ogden, UT*
- I-84 Cable barrier safety improvements from Ogden to Morgan, Weber/Morgan Counties, UT*
- Clinton 2000 West, 1300 North to 2300 North, Clinton, UT*
- West Point Trail Design, West Point, UT*
- Clinton 2300 North Roundabout at 1500 West, Clinton, UT*
- Clinton 1300 North Roundabout at 1000 West and 1000 West improvements, Clinton, UT*
- Redwood Road Street Improvements and Beautification*
- Heber City Main Street Beautification, Heber, UT*
- Bluffdale Park-n-Ride, Bluffdale, UT*
- 3900 South at 500 West Intersection & Pedestrian Access to Light Rail, Salt Lake City, UT*
- North Salt Lake Center Street Trail, North Salt Lake, UT*
- Lindon Heritage Trail, Lindon, UT*
- 5400 South State St Murray High School Signal, Murray, UT*
- 1450 North University Ave, Provo Signal, Provo, UT*
- SR-203 Harrison Blvd at Shadow Valley Drive, Ogden, UT*

**Previous Employer*

Steve Collier, PLS
Project Surveyor & Right-of-Way Design

Education
A.A.S. Surveying and Geomatics,
A.A.S. Pre-Engineering
Salt Lake Community College

Registrations
Registered Professional Land Surveyor:
Utah

Skills and Design
Microstation and Inroads Modules
AutoCAD and Civil Design
Deed Plotters & Legal Aid
Proficient in all UDOT ROW Standards

Contact Information
160 South Main, Suite 200
P.O. Box 280
Farmington, UT 84025
Office: 801.359.5565
Cell: 801.664-4900
steve.collier@crsengineers.com

crsengineers.com

Steve has several years of surveying experience in the survey areas of topographic, boundary, ALTA, and Right of Way. As the land surveying lead, Steve prepares and directs the field crews with all the information and equipment they need to accomplish a successful survey.

Experienced as a PLS, and as former survey crew chief, Steve is proven to manage, direct, and complete accurate surveying and mapping services and deliverables for clients.

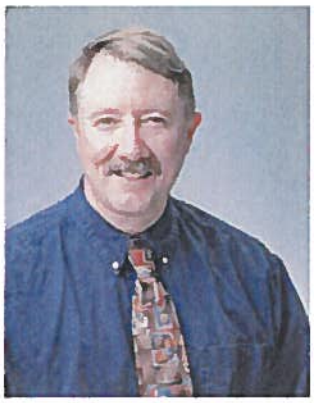
Steve has become an expert with UDOT's Right of Way delivery process, having delivered over 250 parcels on UDOT and WACOG projects.

Steve works closely with his clients to precisely produce surveying and right-of-way information that can be relied upon. Steve is a talented communicator with a proven ability to communicate with residents and stakeholders alike to solve difficult and/or complex property situations.

Representative Experience
He has provided right of way and/or surveying services for numerous projects, including:

- Weber County 12th Street Reconstruction Design & Construction (WACOG), Weber County, UT - 6.5 miles and 178 Parcels
- Ogden 20th Street Roadway Improvements (WACOG), Ogden, UT
- Ogden 17th Street Roadway Improvements (WACOG), Ogden, UT
- North Street Roadway Reconstruction and Signal Design(WACOG), Ogden, UT
- UDOT Park Lane at Clark Lane and 1100 West; Farmington, UT
- UDOT Fort Union Blvd. & Highland Drive Intersection, Cottonwood Heights, UT
- UDOT Pony Express Parkway Improvements; Saratoga Springs, UT
- Davis School District Elementary School #61; Farmington, UT
- Davis School District High School #10; Farmington, UT
- Lone Peak Elementary Topographic Survey and Easement Preparation; American Fork UT
- Davis School District Elementary School Subdivision and Road Dedication Plat; Farmington, UT
- Jordan School District River's Edge Elementary Warranty Deed, UT
- Davis School District Monte Vista Center Construction Survey; Farmington, UT
- Jordan School District Monte Vista Elementary Fire Line Survey, UT
- Jordan School District West Jordan High Parking Upgrade Topographic Survey, UT

Layne Smith, PLS
Survey Manager



Education
B.S., Geography
Brigham Young University

Registrations
Professional Land Surveyor: Utah, Idaho

Skills and Design
AutoCAD and Civil Design
Deed Plotters & Legal Aid
Proficient in all UDOT ROW Standards

Contact Information
2 North Main
Providence, UT 84332
Office: 435.374.4670
Cell: 435.512.2526
layne.smith@crsengineers.com

crsengineers.com

Layne is a licensed Professional Land Surveyor, and has over 25 years of experience with all types of surveys – from boundary and ALTA, to Right of Way, subdivision, and construction layout.

Not only has he surveyed for many cities, municipalities, DOT, and within the private sector, he has surveyed on a federal level for U.S. Army and the U.S. Forest Service agencies.

Layne has a long experience with surveying in throughout Utah as one of the most senior surveyors in the surveying industry. He understands property rights, research and right-of way design/acquisition on transportation projects. Layne has a calming presence that he brings to intense and difficult projects, allowing the project challenges to be solved quickly without escalation.

Representative Experience

- UDOT Mountain View Corridor – Phase 0, 1 Utah County Segment, Utah County, UT
- 400 South Upgrade, Mapping, and Construction Layout, Providence, UT*
- Gateway Drive – 100 South Roundabout, Surveying for Right of Way and Mapping, Providence, UT*
- 1700 South Mapping, Utilities Location, Right of Way, Construction Layout, Logan, UT*
- 200 West Street 2500 North to 3100 North Mapping, Right of Way, Construction Layout, North Logan, UT*
- Gateway Drive – 100 North Intersection and Roundabout Topographic Mapping, Right of Way, Construction Layout, Providence, UT*
- 300 West 1000 South to 800 South Mapping, Right of Way, Providence, UT*
- 2600 South Right of Way, Mapping, Construction; Nibley, UT
- Logan Canyon Bridges and Approaches, Logan, UT*
- Woodruff Elementary New Parking Lot Surveying, Logan, UT
- 15", 750-ft. USU Grand Ave. Extension Irrigation, Utah State University, Logan, UT*
- 30", 1000-ft. HDPE Existing Canal Pipe, Providence Logan Irrigation Company, Providence / Logan, UT*
- 24", 2300-ft Repair and Piping of Existing Canal, Wellsville East Field Irrigation Company, Wellsville, UT*
- 18", 700-ft. Canal Piping and Inverted Syphon, West Cache Canal Company, Amalga, UT*
- 10/12", 3300-ft Existing Canal Piping, Hurren Meadows Subdivision, UT*
- 8", 1200-ft PVC Canal Piping, Grant Haven Subdivision, UT*

**Previous Employer*

Corey Nelson, PE, PTOE
Project Engineer

Education
B.S., Civil Engineering
University of Utah, 2007

Registrations
Registered Professional Engineer: Utah
Professional Traffic Operations Engineer

Skills and Design
Microstation and Inroads Modules
AutoCAD and Civil Design
Proficient in all UDOT Design & Utilities & ROW Standards
UDOT CEMT Certified

Contact Information
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Cell: 801.913-4167
corey.nelson@crsengineers.com

crsengineers.com

As a credentialed PTOE, Corey is experienced in transportation engineering, with specific specialized experience in traffic studies, traffic signal design, railroad crossings, and utility coordination for numerous transportation and freight rail projects.

Corey's strength in traffic signal design is recognized by UDOT and many local municipalities. He serves in an on-call contract for UDOT Region 1, providing direct utility coordination with Rocky Mountain Power for power sources for various signals and other utility coordination tasks.

He has a variety of engineering experience involving grading, utilities and drainage plans for roads, trails and parking lots, and sanitary sewer systems.

Representative Experience

- Weber County 12th Street Reconstruction Design (WACOG), Weber County, UT
- Ogden 20th Street (WACOG); Ogden, UT
- Ogden North Street Roadway Reconstruction and Signal Design (WACOG); Ogden, UT
- Ogden 17th Street Roadway Reconstruction (WACOG); Ogden, UT
- Ogden 36th & Quincy Signal Upgrades, Ogden, UT
- UDOT Fort Union Blvd & Highland Drive Intersection F-LC35(202); Cottonwood Heights, UT
- UDOT US-89 (Washington Blvd) & 26th Street, Ogden S-0089(368)0; Ogden, UT
- Springville 950 W. Railroad Crossing; Springville, UT
- New Mexico Crossing Safety Upgrades, 11 total crossings
- 200 North; 900 West to Flint Street F-LC11(49); Kaysville, UT
- Park Lane at Clark Lane and 1100 West F-LC11(42); Farmington, UT
- Farmington Park Lane Signal Upgrades; Farmington, UT
- UDOT SR-193 utility coordination and review; UDOT Region 1; UT
- UPRR Pavement management, review and assess over 2000 acres of pavement for UPRR across U.S.
- UDOT Four Railroad Ped. Crossing Upgrades F-R199(210); Logan, UT
- UDOT Three Railroad Pedestrian Crossing Upgrades F-R299(226); Salt Lake City, UT
- UDOT Farmington Creek Trail, Farmington, UT
- UDOT Clearfield D&RGW Rail Trail, Clearfield, UT
- UDOT West Bountiful D&RGW Rail Trail Construction Engineering, West Bountiful, UT
- Desert View Overlook and Trail, Las Vegas, Nevada
- UDOT Farmington D&RGW Rail Trail, Farmington, UT
- UDOT 400 North, Resident Engineer, West Bountiful, UT
- UDOT SR-30 & SR-101 Chip Seal
- UDOT Monticello Welcome Center Parking Lot, Monticello, UT
- Salt Lake City HAWK Pedestrian Signals, Salt Lake City, UT
- Rexburg HAWK Pedestrian Signal, Rexburg, ID
- UDOT Station Park Road, Farmington, UT
- UDOT Kaysville 200 North & Main Intersection Improvements Construction Engineering, Kaysville, UT
- UDOT I-215 Cable Barrier Installation, North Salt Lake, UT

Chuck Easton, RPA
Manager
Environmental Services

Education
B.S. Anthropology,
M.A. Ancient Studies

Affiliations
Utah Professional Archaeological Council
Register of Professional Archaeologists
Utah Statewide Archaeological Society

Contact Information
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Farmington, Utah 84025
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chuck.easton@crsengineers.com

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Chuck serves as CRS' Environmental Manager with 20 years' experience in project compliance with the National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA), and Section 4(f) of the Department of Transportation Act.

His experience includes developing and writing Purpose and Need statements, alternatives development and screening, environmental resource analyses, and public and stakeholder coordination. Having written many NEPA documents of all levels, Chuck has a thorough working knowledge of all other resources considered in NEPA such as Land Use, Environmental Justice, traffic noise and air quality impacts analysis, hazardous materials, and indirect and cumulative effects.

For the last 11 years, Chuck has also been supporting the public involvement and public relations efforts for dozens of projects, including large EISs and EAs. Chuck is a skilled communicator with expertise in public involvement, strategic communication planning, conflict resolution, and facilitation.

Representative Experience

- Weber County 12th Street Reconstruction Design (WACOG), Weber County, UT – Environmental Lead
- Pleasant View Skyline Drive EA*† (WACOG); Ogden, UT
- UDOT Pony Express Parkway Improvements; Saratoga Springs, UT
- UDOT/Syracuse Gentile Street and Bluff Road Intersection, Syracuse, UT
- UDOT 200 North: 900 West to Flint Street; Kaysville, UT
- UDOT I-80 State Street Interchange EIS with Horrocks*†
- UDOT Little Cottonwood Canyon, Snowbird Entry*†
- UDOT Tooele Midvalley Highway EIS Re-Evaluation*†
- UDOT SR-71 Ellerby Avenue Intersection Improvements*†
- UDOT US-89; SR-203 Intersection Improvements*†
- UDOT Wasatch County RR Trail*†
- UDOT Orem Center Street Widening*†
- UDOT Saratoga Springs Utah Lakeshore Trail*†
- Utah County Salem Parkway, Local Government EA*†
- UDOT I-15 Layton Interchanges*†
- UDOT/Ogden City Harrison Boulevard; 7th Street to 2nd Street*†
- UDOT 4800 West; 9800 South to 10200 South*†
- UDOT 1100 North; I-15 to Redwood Road, North Salt Lake*†
- UDOT 6200 South; 6100 West to U-111*†
- UDOT 24th Street EA*†
- UDOT S-89; Ephraim to Pigeon Hollow*†
- UDOT 200 South Main St. Kaysville Signal*†
- UDOT Lindon Heritage Trail*†
- UDOT Utah Lake Beach Trail Feasibility Study*†
- UDOT Spanish Fork River Trail*†

**Included public hearing, and intensive stakeholder and public involvement*
†Previous employer

MARTY ASAY – PUBLIC INVOLEMENT MANAGER

RELEVANT EXPERTISE

Conflict Resolution | Facilitation | Partnering | Coordination (EMS, MOT, Local Governments, Schools, Nearby Projects) | Presentation Skills | Stakeholder Relations | Project Management

PROFESSIONAL EXPERIENCE

Marty, vice president of FrontLine Public Involvement, will work together with the project team to ensure a successful project. Marty will be available to attend all meetings, including local government/public meetings, as well as provide his strategic and tactical input throughout the project. He has more than 15 years of experience in communication and public information/involvement on multiple transportation projects. Marty has developed many complex strategic and tactical public involvement approaches that are now used routinely including GIS Story Maps, Community Coordination Teams, production of interactive project diagrams and large-scale graphics for public events with useful information that increase project buy- in from the public. Marty is a firm believer in one-on-one involvement with key stakeholders and has a long record of resolving difficult issues to the satisfaction of both project owners and stakeholders, while building public trust. Some of his notable projects include:

12th Street Corridor Expansion Phase I, Weber County, UT.
A 2 mile rebuild of west 12th Street in Weber County. Marty worked daily as the PI Manager on the 12th Street Expansion project and has a working knowledge of the unique challenges faced in an expansion project. Challenges include close daily coordination with designers and engineers, right of way coordination, daily communications with project manager, supervisors and the employees performing the work. A careful understanding of critical stakeholders and the knowledge and skills of how to deal with each and bring them to a consensus and understanding of how the project can accommodate most of their concerns is an important ability Marty possesses.

3500 West Phase II – Weber County, UT.
Marty coordinated all public involvement duties including outreach to local governments, law enforcement and first responders and property owners to share information and respond to questions and concerns. More than 75 residences dot the corridor. Marty handled preparation and distribution of project updates and construction progress reports. Public involvement efforts also included direct coordination with utilities both large and small the traveling public. Marty maintained the project hotline and responded to every phone contact live.

Riverdale Road Reconstruction CM/GC, Phases 1 through 4, Riverdale, UT. UDOT.
Public Involvement Manager. Marty coordinated all public involvement duties including project identity development and personal, regular contact with more than 300 corridor businesses. He coordinated bus detours, alternate stop locations and closure/restrictions carefully with UTA. additionally, Marty developed and facilitated a business district advisory board; conducted incentive balloting and reporting; developed and managed project specific website and unique local area-wide website; developed and maintained project database; prepared and distributed weekly updates; coordinated right of way acquisitions; coordinated project betterments with local governments; developed local government reporting meetings; organized public open houses and employer informational meetings; coordinated impacts with local law enforcement; organized and conducted a ground breaking and ribbon cutting "Open to Traffic" parade.

EDUCATION

B.A. Communication (Public Relations Emphasis) University of Utah, Salt Lake City

JARED A. HAWES, P.E.

Title	Project Manager
Expertise	Geotechnical Site Assessment, Civil & Environmental Engineering, Design and Construction Management,
Academic Background	B.S., Civil & Environmental Engineering, University of Utah (1999)
Registration	Professional Engineer – Utah MSHA, since 2000
Experience	Mr. Hawes has over sixteen years of hands on problem solving and management in geotechnical site evaluation, project design, and construction observation for a wide variety of residential, commercial and municipal projects. Familiarity with design and construction processes for earth structures, foundations, road construction, underground utility installation and solid waste management. Mr. Hawes has provided site investigations, geotechnical consulting, engineering analysis, and project management for numerous projects that include underground utility installation, road construction, deep foundation design and construction. Mr. Hawes has worked on various projects for many Utah municipalities that include, Clinton, Logan, Murray, Sandy, South Jordan, Syracuse and West Jordan Cities. Among his clients are several special service districts including North Davis Sewer District, Wasatch Integrated Waste Management District, Central Weber Sewer Improvement District and Jordan Valley Water Conservancy District who also provide necessary public services. Additionally, Mr. Hawes has expertise in GIS, AutoCAD and Civil 3D drafting/engineering software.

Geotechnical Consulting

- Nibley Parkway Frost Heave Mitigation, Nibley, UT – Investigated subsurface conditions for portion of Nibley Parkway Blvd which had experienced significant frost heave during winter months. The portion of the Parkway assessed was in a low-lying, poorly drained area of the city with high groundwater.
- 450-550 North Road Construction, Millville, UT – performed geotechnical investigation for construction of approximately 1,400 feet of new connector road between 450 North and 550 North across existing farm fields.
- 700 East Road Improvements, Morgan UT – Geotechnical investigation and recommendations for road widening and reconstruction of existing roadway between 300 East and Mahogany Ridge Road (approximately 0.7 miles). Performed site investigation using excavation sampling and field testing of near surface conditions using Drop Cone Penetrometer (DCP) testing equipment. Prepared pavement design and road grading recommendations for construction.
- 3000 West and 1000 West Road Improvements, Clinton, UT – Performed geotechnical field investigation to support replacement/rehabilitation and design of pavement for road widening between 1300 to 2415 North and a new extension of 3000 West to 6000 South in Hooper (Weber County, UT). Road improvements included replacement of the Layton canal crossing in multiple locations. Evaluation along 1000 West included both asphalt

and rigid pavement assessment, including recommendations for frost protection and construction of a roundabout.

- 3000 West Road Improvements, 1200 South Road Construction, Syracuse, UT – Subsurface investigation and field Drop Cone Penetration (DCP) tests were performed to support rehabilitation and new construction of the above-mentioned roadways. Both asphalt and Portland cement concrete pavement alternatives were evaluated, along with assessment of existing base soils for reuse in reconstructed pavement sections.
- Powder Mountain Ski Resort, Weber County, UT – Provided geotechnical investigation and construction support for development of access roads, bridges, retaining walls and utility installations within proposed ski resort development near Eden, Utah.
- SR 45, MP 5, Bonanza, Uintah County Utah – Managed geologic/geotechnical team during investigation and design of drilled shaft foundations for bridge crossing historic Gilsonite mine trench. Worked extensively with structural design team and UDOT geotechnical/structural engineers to determine a workable solution on tight time frame.
- SR 304 (Elkol Road) Diamondville, WY – Performed geotechnical engineering services for rehabilitation of approximately 3 miles of roadway that serves as the main access and coal hauling route. Road extended from foothills near coal mine, through low valley marshes and canyon drainages approaching Highway 189 near Diamondville/ Kemmerrer.
- Shaft 8 Road (FMC Corporation) Little America, WY – Performed geotechnical investigation and prepared pavement design for road construction approximately 2.5 miles of road in Sweetwater County. Performed site investigation using excavation sampling and field testing of near surface conditions using Drop Cone Penetrometer (DCP) testing equipment. Prepared pavement design and road grading recommendations for construction.
- Weber/Davis Aqueduct (Weber Basin Water Conservancy District), Performed geotechnical evaluation and corrosion assessment of soils along existing pipeline alignment located along foothills of Wasatch Mountains between Bountiful and Ogden, UT. Soil sampling was performed with aid of percussion hammer drill rig at various locations in residential areas as well as along Highway 89 and Interstate 84 as they pass through Davis and Weber Counties near the mouth of Weber Canyon.
- Wasatch Integrated Waste Management District (Davis Landfill) Layton, UT – provided geotechnical and civil engineering services for numerous facility improvements performed at the Davis Landfill and Energy Recovery Facility in Layton, Utah. These improvements have included construction of retaining walls, public drop-off facilities, storm water management systems and office expansion. Mr. Hawes has also worked closely with landfill personnel in planning of access roads and traffic routing to support changes in operations and operational modifications at the landfill.

Professional History

September 2000-present, project engineer, project manager, senior engineer
Intermountain GeoEnvironmental Services, Inc. (IGES) Salt Lake City, UT

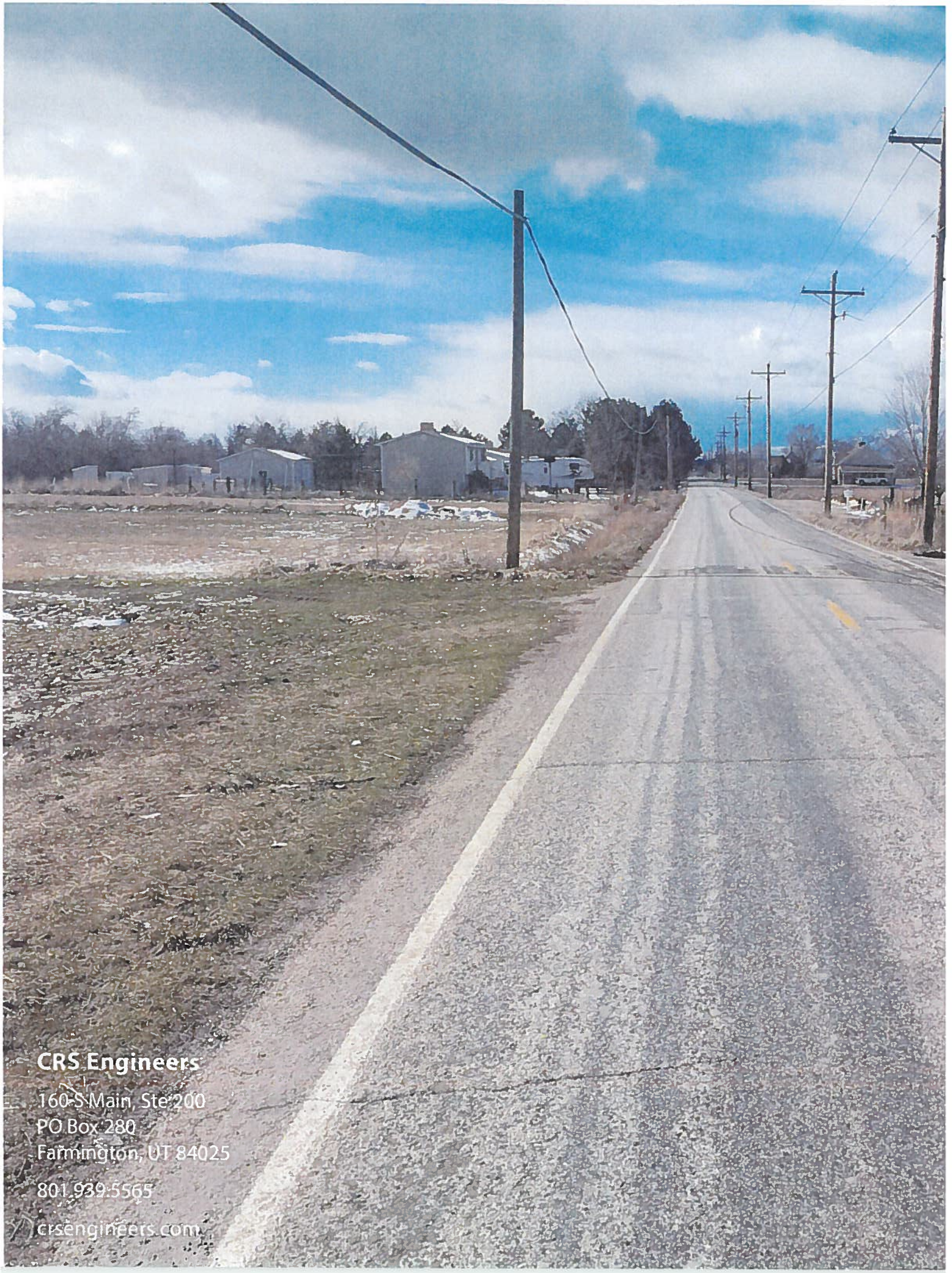
April 1999 – September 2000, Staff Engineer, Psomas Engineering, Salt Lake City, UT

September 1997 – April 1999, Field and Laboratory Technician, Kleinfelder and Associates, Salt Lake City, UT

April 1997 – August 1997, Survey Technician, U.S. Bureau of Reclamation, Burley, ID

Professional Affiliations

Member, American Society of Civil Engineers
Member, The Solid Waste Association of North America



CRS Engineers

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PO Box 280
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801.939.5565

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MERIDIAN ENGINEERING, INC

Jacques & Associates

KCI

aero-graphics

Response to Request for Proposals for Surveying & Design Services on 3300 South

WEBER COUNTY

MERIDIAN
ENGINEERING, INC

Weber County
2380 Washington Blvd., Suite 260
Ogden, Utah 84401

March 8, 2017

Attn: Brianna Sederholm, Weber County Purchasing Agent
Re: Weber County Request for Proposal (RFP) for Surveying and Design Services on 3300 South

Meridian Engineering, Inc. (Meridian) is pleased to submit our qualifications for evaluation. We have assembled a qualified and experienced team, and we are prepared to support Weber County with surveying and design services on 3300 South.

In response to the RFP requirements, Meridian does hereby acknowledge our intention to participate in a contract with Weber County, and does further stipulate and certify the following:

1. Meridian will comply with all terms and conditions as indicated in the RFP.

2. Meridian does not discriminate in its employment practices with regard to race, color, religion, age, sex, marital status, political affiliation, national origin, or handicap.

3. Darryl J. Fenn, PLS, is President and Principal Owner of Meridian Engineering, Inc. with full rights of signing authority for the company.

4. Meridian Key Contacts:

Primary:	Darren Williams, PLS Project Manager	801.458.1891 dwilliams@meiamerica.com
1st Backup:	Darryl Fenn, PLS Principal In Charge	801.569.1315 dfenn@meiamerica.com
2nd Backup:	Ryan Nuesmeyer, PE Roadway Design Manager	801.915.2017 rnuesmeyer@meiamerica.com

5. Meridian has included the Respondent Questionnaire and Conflict of Interest Form as Appendix A and Appendix B, respectively.

Respectfully,

Darryl Fenn, PLS, President

Meridian Engineering, Inc.
9217 South Redwood Road, Suite A
West Jordan, Utah 84088
Ph: 801.569.1315 | Fax: 801.569.1319

MERIDIAN ENGINEERING, INC

Project Approach

Understanding the Project

Meridian Engineering, Inc. (Meridian) has reviewed the Weber County (County) Request for Proposals for Surveying and Design Services on 3300 South (RFP) and has conducted our own supplemental research to better understand the project site and existing features. In addition, we have reviewed the project with the County and have a firm understanding of the County's goals.

As stated in the RFP, 3300 South is a major east-west corridor in Weber County, especially with its connectivity to Midland Drive. We understand this corridor's importance to the community, with the West Haven City shops and park located on this corridor. Through our research, we have identified 33 different landowners along the corridor, of which approximately 7 have already been widened to at least a 40-foot half-width right-of-way.

Note: *Meridian has reviewed the project timetable for this project and has the staff availability to start this project at the same time as the 2550 South project (rather than June 30th as stated in the RFP) if the County desires. This earlier start date will allow us to complete the 3300 South project before the end of October.*

Based on our experience on similar WACOG and other county corridor preservation projects, Meridian has identified 4 key goals of this project:

- ✓ Obtain topographic and utility location surveys to understand existing conditions
- ✓ Develop conceptual roadway design sufficient to determine right-of-way needs
- ✓ Prepare right-of-way design, legal descriptions, and exhibits for right-of-way acquisition
- ✓ Provide public involvement support to assist with public information meetings and meetings with landowners.

Management

Meridian has prepared a management team comprised of experts in their respective disciplines. Our team has extensive experience working together and a track record of providing excellent client service and top-quality surveying and engineering.

Darryl Fenn, PLS
Darryl is the President and Principal In Charge overseeing product delivery and contracting.

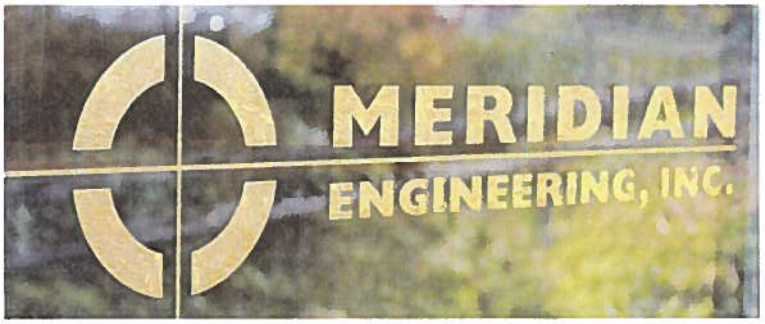
Darren Williams, PLS
As Project Manager and Weber County resident, Darren will be the primary Point of Contact with the County.

Ryan Nuesmeyer, PE
Ryan will lead the engineering effort, including the roadway design team and traffic analysis (as needed).

Mike Nadeau, PLS/CFedS
Mike will provide Survey services, including topographic and utility location surveys to understand existing conditions.

Brad Mortensen, PE, PLS
Brad will provide Quality Control/Quality Assurance services on all deliverables to Weber County.

Sydne Jacques, PE
Sydne will provide Public Involvement services such as public meetings and visits with project-adjacent property owners.



MERIDIAN ENGINEERING, INC

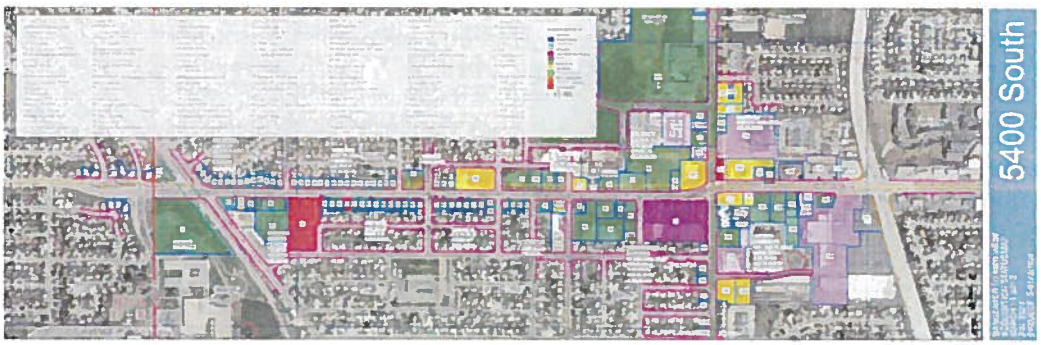
Team

A key element of a successful project approach needs to start with the right team. Meridian has assembled a team of professionals who are leaders in their respective fields.

- AeroGraphics is a local aerial mapping firm that will provide the County with digital aerial imagery and 3D mapping at 0.1-foot/pixels. Meridian and Aero-Graphics have a long history of working together on WACOG projects supporting roadway engineering and right-of-way acquisition.
- KCI Technologies provides a seasoned team of professionals, providing subsurface utility engineering (SUE) services to municipalities, departments of transportation, and other private companies.
- Jacques & Associates will provide public involvement project management, develop and execute the best PI Plan, and maintain a strong presence in the community to constantly provide information and respond to stakeholder concerns. They will be a consistent point of contact for the public throughout the duration of the project.

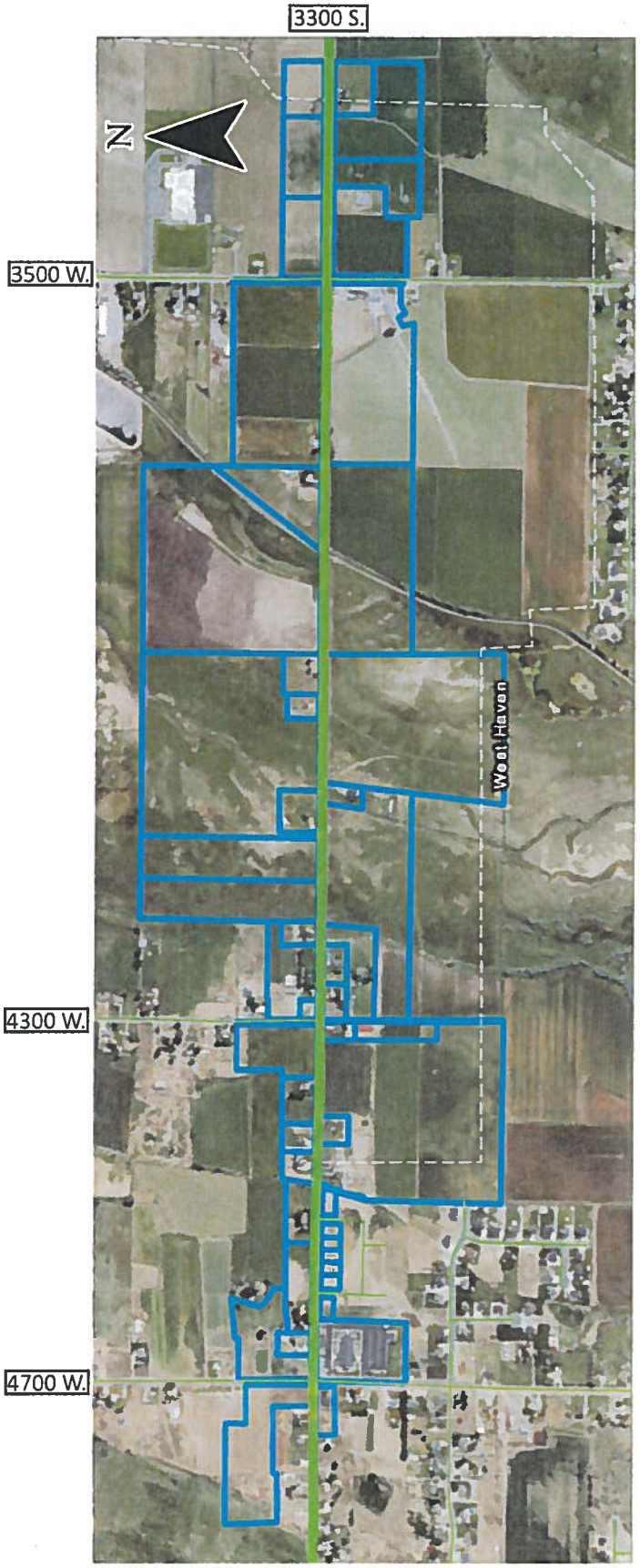
The Meridian team approach provides a number of distinguishing strengths and benefits for the County:

- Meridian provides an experienced management team that is energetic, eager to help on this project, and is supported by an unmatched technical staff.
- Meridian's high-accuracy conventional survey supplemented by aerial mapping will provide a cost-effective means of acquiring existing topography, one foot (1') contours for design, and updated aerial imagery of the project corridor with minimal intrusion on landowners' property.
- Meridian is experienced with WACOG projects, having worked on 3 projects in the last 3 years.
- Meridian utilizes TURN GPS (The Utah Reference Network GPS) managed by the State AGRC (Automated Geographic Reference Center) to provide real-time latitude and longitude. The TURN GPS system provides a consistent base network and supports correlation of survey data to a common datum. This allows for an easier integration with existing GIS systems and helps maximize our survey crews' efficiency.
- Meridian utilizes a proprietary Right-of-Way Database and Document Automation system to produce right-of-way documents necessary for acquisition. We can correlate right-of-way data with GIS to identify parcel priorities, track status, and deliver right-of-way design documents with nearly unmatched accuracy and consistency, adding significant value to this project.
- **Shown below** is an example of a right-of-way GIS map prepared by Meridian to support a widening project in Kearns, Utah. This GIS-supported map was updated biweekly by Meridian and assisted the Project Team and Right-of-Way Acquisition Lead to know important information regarding acquisition status and to identify parcel issues which could impact schedule. This map is web-based and interactive, and can be accessed by computer or mobile device. Meridian will prepare a similar map for this project and will provide the county with constant, realtime status updates on each parcel.
- Meridian's roadway design staff has experience providing design on similar county corridor preservation projects and understands the WACOG corridor preservation process. Ryan Nuesmeyer will lead our roadway design group to prepare multiple alignment alternatives within the limits of the existing restraints (e.g. environmental areas of concern, existing utilities/ canals, etc.) and work with the County to select a preferred horizontal and vertical alignment.



MERIDIAN ENGINEERING, INC

Work Plan



Based on Meridian's initial research and understanding of the project, we have identified approximately 33 Ownership Parcels along the roughly 1.8 mile corridor (shown on the left), of which 7 have already dedicated at least a 40-foot half-width ROW. Meridian understands the importance of identifying the boundaries of all these parcels and working with the County to reduce the number that are affected.

To complete all survey and right of way design requirements as outlined in the RFP, Meridian will complete the following tasks:

1. Develop Base Mapping/Existing Surface/Utility Investigations
2. Identify Existing Right-of-Way
3. Develop Conceptual Roadway Design
4. Identify Right-of-Way Needs and Develop Exhibits & Descriptions for Acquisition

Task 1: Develop Base Mapping/Existing Surface/ Utility Investigations

- Establish Survey Control in accordance with standard survey practices utilizing VRS, GPS, Robotic Total Stations, and Digital Levels. Set 12 aerial targets including Horizontal and Vertical Control Points along the project corridor.
- Conduct surveys to develop a Survey Control Datum and Project Projection. Survey all features within the existing right-of-way, including concrete pads, edge of pavement, visible pavement crowns, signage, structural and landscape walls, fences, barriers, mailboxes, commercial signs, grade changes, breaks, toe and top of slopes, open ditches, drainage areas, and other grade transitions.

  Note: *Meridian's team will notify residents of the pending surveying activities. Meridian will always seek permission to access private property prior to entering to conduct surveys.*
- Coordinate with Aero-Graphics to obtain aerial mapping of existing topography and define ground features outside of the existing ROW, greatly reducing the need to access landowners' property. Develop one-foot (1') contours as needed for design.

  Note: *Meridian understands that the County also has issued an RFP on 2550 South. Completing the topographic survey and aerial survey on both projects at the same time would provide the County with cost savings.*

- Locate Public Land Survey System (PLSS) Section Corners and/or County street monuments, right-of-way markers, and property corners.
- Conduct utility investigation and survey utility facilities including wires, poles, manholes, catch basins, valve vaults, and other indications of subterranean uses.
- Obtain available utility maps and utility GIS information on existing utilities from Weber County and local utility providers, and develop an existing utility drawing.
- Meridian will also coordinate with sub-consultant KCI Technologies for 100 test holes at utility conflict areas.
- Develop Base Mapping file and DTM of the existing surface.
- Prepare a certified Survey Control Sheet showing all primary and secondary survey control along with a Surveyor's Narrative outlining procedures, basis of bearing/coordinates, scale factor, and listing of control point Geodetic coordinates and State Plane values.

Task 1 Deliverables
- Survey Control Sheet certified by a Utah Professional Licensed Surveyor
- Topographic Survey File and DTM Surface in AutoCAD Civil 3D
- Updated Aerial Imagery of the Project Corridor

Task 2: Identify Existing Right-of-Way
- Research existing right-of-ways and property deeds for project area.
- Obtain County Ownership Plat Maps.
- Obtain Subdivision and Dedication Plats.
- Obtain Records of Survey Plats.
- Develop existing right-of-way property map in AutoCAD Civil 3D.
- Develop existing property ownership spreadsheet, identifying all property owners and Tax ID information within the project area.
- Load ownership data into Meridian's Right-of-Way Database for document preparation.
- Create GIS Ownership Parcel tracking map.

Task 2 Deliverables
- Existing Right-of-Way Map
- Property Ownership Spreadsheet
- GIS Ownership Parcel Tracking Map

Task 3: Data Analysis & Roadway Design

Existing Data Analysis
- After receiving Notice to Proceed, our transportation engineer, Steve Johnson, will begin gathering/reviewing any traffic studies that have recently been completed within the surrounding area. We will use this information to gain more understanding of projected traffic growth within the project limits.
- Based on the existing volumes on 3300 South (1,200 AADT) and the 3 major cross streets (3500 W, 4300 W, & 4700 W; approximately 2,000-4,000 AADT), it is unlikely a signal would be warranted under current conditions. However, a signal may be warranted in the future and our team will coordinate with the county to determine if ROW should be acquired as part of this project to accommodate future traffic signals.
- If, after discussions with the County, it is decided to prepare a concept environmental analysis, Meridian will seamlessly incorporate this addition into our work plan and schedule. Meridian has experience teaming with various environmental groups with local Weber County expertise.

Roadway Design
- Ryan Nuesmeyer understands the WACOG corridor preservation process. He will ensure his team provides a design that complies with current AASHTO/MUTCD/APWA standards, is consistent with the County's design criteria for the corridor, and is designed to the appropriate level of detail to acquire the proper right-of-way for the future roadway project.
- After topographical survey has been completed, Meridian will immediately begin the roadway design. Our team will evaluate multiple horizontal and vertical alignments to prepare several alternatives that balance the roadway design criteria (e.g. proposed cross section, fill slope grades, design speed, etc.) with the existing topography and existing conditions.

- Some of the conditions our team will consider include:
  - ☑ Environmental areas of concern
  - ☑ The three canal crossings
  - ☑ Varying existing ROW widths (our design will take full advantage of the existing 80-ft roadway dedications)
- During this phase of the project, Meridian will hold regular team meetings with the County to coordinate on the various design alternatives and discuss balancing impacts to the previously mentioned items. Our team will be in constant coordination with the County as we work together to select the preferred alternative for this project. Once the roadway design has been approved by the County, Meridian will prepare plan and profile exhibits that detail all the horizontal and vertical geometric elements of the approved design. Meridian will deliver these exhibits along with the digital design files and proposed design surface.
- Having been involved in multiple corridor preservation projects during the right-of-way design phase and during the final design phase, our team understands the importance of properly documenting design decisions and clearly documenting the details of the design. This information will ensure that final design can pick up exactly where this design left off to provide an efficient final design that is compatible with the acquired ROW.
- Our team has all the technical capabilities, experience and leadership needed to provide this design.

Task 3 Deliverables
- Roadway Design Alternatives
- Finalized Approved Roadway Design
  - PDF Plan & Profile Exhibit
  - Digital Design Files & Surface

Task 4: Identify Right-of-Way Needs and Develop Exhibits & Descriptions for Acquisition

- Compare and analyze conceptual roadway design against existing right-of-way to determine which parcels will be impacted.
- Develop right-of-way design.
- Update GIS Right-of-Way Tracking Map.
- Prepare right-of-way summaries, which include ownership records, right-of-way plan sheets, and legal descriptions for right-of-way fee takes and/or easements required for acquisition.
- Provide public involvement support to meet with each landowner.

Note: *Meridian understands the importance of working closely with the ROW Acquisition team in identifying any issues with ownerships, as-occupied discrepancies, gaps, and/or overlaps between adjoining property owners in order to help mitigate impacts to the acquisition schedule. We also understand the difficult task of meeting with landowners to discuss right-of-way acquisition. To aid in those meetings, Meridian will prepare exhibits for each property owner to more clearly illustrate the impacts of the project on their property.*

- Meridian will also hold regular meetings to provide updates on the status of ROW acquisition.
- It is our recommendation that a Record of Survey plat be prepared as part of this project showing the location of survey markers found or set along the project corridor to help in perpetuating the location of the existing and new right-of-way.
- Sydne Jacques and her team at Jacques & Associates have extensive local experience, working closely with local governments throughout Utah, cities across the state, and managed the public communications for numerous state projects in every region. Sydne and her team will host 2 public meetings to introduce the project. They will then meet with property owners in advance of the acquisition team to gauge owners' willingness to sell the required ROW.

Task 4 Deliverables
- Public Involvement Support for Meeting with Landowners
- ROW Plans or Exhibits for Each Parcel Affected by Acquisition
- Deeds and/or Easements Required for Acquisition
- Record of Survey Plat Certified by a Utah Professional Land Surveyor
- Updated GIS Right-of-Way Tracking Map

MERIDIAN ENGINEERING, INC

Qualifications & Experience

Meridian Engineering, Inc. (Meridian) is a full-service Civil Engineering and Surveying firm headquartered in West Jordan, Utah, offering professional consulting services throughout the intermountain region. *"We are proud of our heritage and ready for our future."*

Meridian was founded in 1997 to provide engineering, surveying/mapping, and right-of-way design services to state and local governments. Licensed to conduct business in the State of Utah, Meridian provides a wide range of services across the intermountain region.

Meridian employs a diversified staff of 36 professionals with strong technical backgrounds and experience. Our licensed professional staff includes multiple Engineers and Land Surveyors who are supported by a proficient field and design staff.

As a leading engineering firm along the Wasatch Front, Meridian encourages our staff to maintain their professional development, seek learning opportunities, and leverage technology to better serve our clients.

What Sets Us Apart?

With 10 licensed Professional Land Surveyors on staff, we at Meridian distinguish ourselves from our local competitors by providing our clients with the widest range of professional experience to tackle any project, large or small. With our knowledge of the survey/mapping and right-of-way industry and state laws governing the profession, we continually bring success to our clients' projects in an affordable and timely fashion.

WACOG Experience

Meridian has experience with multiple WACOG-funded projects, including Washington Boulevard, Monroe Boulevard, and 2550 North. This experience has allowed us the opportunity work closely with Mayors and City Council Members to address community concerns and create solutions for their projects. We understand the difference between the UDOT process and WACOG requirements, and we will use this knowledge to ensure this project is a success.

UDOT Qualifications

Meridian is highly ranked in the UDOT 2017-2019 Prequalification Pool in the disciplines of Right-of-Way Engineering, Survey Services, and Preconstruction Engineering. Our extensive experience in the transportation industry prepares us to handle any situation that may arise on this project.

Strengths & Capabilities

Meridian's corporate organization is structured to deliver outstanding management and technical strengths. These include:

✓ **Leadership & Management**

Meridian's Project Manager will be the single point of contact for the project and will be responsible for the delivery of the project. If an issue ever arises that requires escalation, a Principal of Meridian is assigned to each project to be an additional resource.

Meridian feels that leadership and management of our internal team are vital components of providing a quality product to Weber County and of developing our staff. Our Project Managers are an integral part of the project team; they work closely with the right-of-way squads and the design engineers to collaborate on project decisions and to coordinate on project schedule and budget.

Meridian utilizes project management software that aids our Project Managers in monitoring project progress. We use this information to make proactive corrective adjustments to ensure projects are delivered on schedule and within budget.

✓ **Collaboration & Communication**

Meridian's organization defines clear reporting responsibilities across the management, administration, and technical levels of a project. Established lines of communication are key in defining assignments, making decisions, resolving issues, and providing the structure needed to support the efficient operation of our team.

Meridian understands the importance of quality documentation and the close coordination between our client and all stakeholders, which is necessary for keeping projects moving forward.

✓ **Work Quality**

Recognizing the important of Quality Control and Quality Assurance (QC/QA), Meridian has developed a company philosophy that every deliverable undergo a complete QC/QA review.

✓ **Schedule & Cost Control**

Meridian develops realistic project schedules utilizing MS Project for delivering projects on time

and within budget. We monitor key milestones on the critical path and our Project Manager reviews schedules with the team weekly. Any lapse in the schedule is addressed and corrective action taken, while keeping the County Project Manager informed during coordination meetings.

Meridian is keenly aware of the critical nature of maintaining a project budget. We know every dollar counts, and our experience has shown that schedule control is the best way to keep projects within budget. Our commitment is to maintain schedules and projects within budget.

✓ **Our Commitment**
At Meridian we value all our clients, and we undertake to manage projects in a manner consistent with our commitment to ensure adequate resources are assigned to accommodate project workloads.

Our experience with survey/mapping and right-of-way design services for state, local governments/ agencies, and private clients provides us with a sound understanding of the detail-oriented standards expected from local municipalities, County Surveyors, and County Recorders around the state.

✓ **Technology Integration**
Meridian recognizes technology is constantly evolving and enhancing our capabilities to provide more efficient services. In one such case, Meridian has partnered with UDOT and pioneered a workflow system to adjust available mapping grade mobile LiDAR data in order to meet certain engineering design standards.

✓ **Safety**
Meridian maintains survey staff current with OSHA 10-Hour, MSHA 24-Hour, and HAZWOPER 24- and 40-Hour Training.

✓ **Professional Insurance Coverage**
Meridian carries the following general and professional liability insurance:

☑ Professional Liability: $2,000,000
☑ General Liability: $1,000,000
☑ Umbrella Liability: $5,000,000

Meridian's Professional Liability Carrier is XL Speciality Insurance Company, our General Liability Carrier is Travelers Property & Casualty Company of American, and our local insurance representative is American Insurance and Investment Corporation.

✓ **Equipment & Resources**
Computer and CADD Capabilities: Meridian has a fully equipped office that includes Computer Aided Drafting & Design (CADD) stations, plotters, printers, and copiers, along with the hardware and software required to succeed in today's work environment. Additionally, Meridian is competent with industry-standard software.

Meridian's standard CADD design software includes MicroStation, InRoads, and OpenRoads for supporting this project. Our staff is also experienced with 3D modeling and routinely employs AutoCAD Civil 3D for private clients.

GIS Capabilities: Meridian is capable of supporting the Weber County GIS Department with Geographical Information Systems (GIS) database design and support services utilizing ESRI ArcGIS products.

ROW Automation Capabilities: Meridian utilizes a proprietary Right-of-Way Databse and Document Automation process to manage and produce right-of-way ownership records, deeds, and easements for acquisition. With GIS we can correlate right-of-way and ownership data to identify parcel priorities and track status—this ability allows us to deliver right-of-way design, documents, and maps under the most schedule-driven requirements.

Survey Capabilities: In keeping up with the technology of tomorrow, Meridian utilizes state-of-the-art equipment for its survey crews. Each survey crew is equipped with the tools and technology needed to keep our surveyors as productive and efficient as possible.

Meridian operates multiple Trimble Global Navigation Satellite System receivers, and we have a subscription to The Utah Reference Network GPS managed by the State of Utah through the Automated Geographic Reference Center to provide real-time latitude and longitude anywhere in Utah. Meridian also operates Trimble S6 Robotic Total Stations, along with Digital Levels, all driven by Trimble TSC3 Data Collectors.

Meridian routinely utilizes specialized survey equipment to meet specific project and client requirements. This equipment includes

- Trimble and Topcon GPS with GLONASS Capabilities
- Trimble Conventional and Robotic Total Stations
- Leica C-10 LiDAR Scanner
- Faro Focus 3D LiDAR Scanner

MERIDIAN
ENGINEERING, INC

Washington Blvd. Widening

North Ogden, UT

WACOG PROJECT

Contact: Matt Hartvigsen, PE — *City Engineer*
Jones & Associates, 801.476.9767

Team Member	Role
Darryl Fenn, PLS	Principal In Charge
Darren Williams, PLS	Project Manager
Mike Nadeau, PLS/CFedS	Survey Manager
Tyler Baron, PLS	ROW Manager
Freeman Marble	Survey Crew Chief
Aaron Inabnit, PLS	ROW Design
Jeff Maumalanga	ROW CADD
Travis Williams	Survey CADD

Meridian provided survey and right-of-way design services in direct support of the design and widening of Washington Boulevard between 2600 North Street and Mountain Road. Researched existing right-of-way lines and property deeds for the 1.8-mile corridor which included 134 parcels, developed existing right-of-way property map and property ownership spreadsheet, develop right-of-way design and GIS right-of-way map, and prepared right-of-way summaries, including ownership records, right-of-way plan sheets, and legal descriptions for right-of-way takes and easements.

Monroe Blvd.; 1500 North to 3100 North

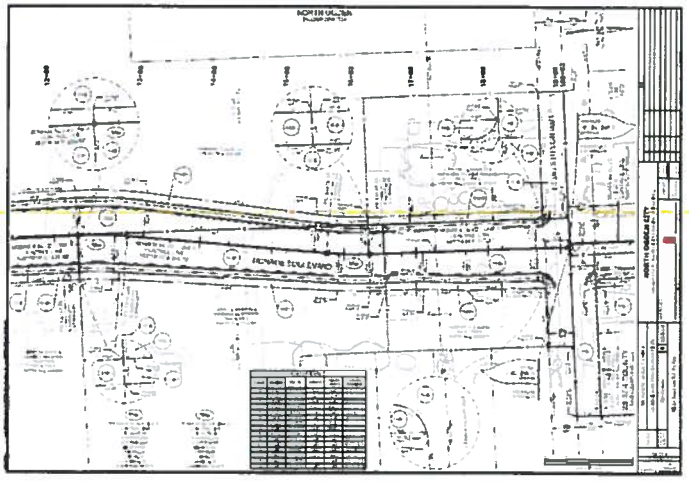
North Ogden, UT

WACOG PROJECT

Contact: Matt Hartvigsen, PE — *City Engineer*
Jones & Associates, 801.476.9767

Team Member	Role
Darryl Fenn, PLS	Principal In Charge
Darren Williams, PLS	Project Manager
Mike Nadeau, PLS/CFedS	Survey Manager
Tyler Baron, PLS	ROW Manager
Freeman Marble	Survey Crew Chief
Aaron Inabnit, PLS	ROW Design
Gustave Denham II	ROW CADD
Travis Williams	Survey CADD

Meridian contracted with North Ogden City to provide survey and right-of-way services in direct support of the design, widening, and extension of Monroe Boulevard between 1500 North and 3100 North. Established survey control and prepared Survey Control Diagram. Conducted full design survey and prepared Digital Terrain Model of the existing surface. Developed existing right-of-way/property matrix and new right-of-way design. Prepared right-of-way maps and legal descriptions for right-of-way takes and easements affecting 34 separate ownership parcels. Prepared a final Record of Survey to file with the Weber County Surveyor's Office.



MERIDIAN ENGINEERING, INC

2550 North; Safe Route to School

Pleasant View, UT

WACOG PROJECT

Contact: Toby Mileski — *Mayor*
Pleasant View City, 801.827.0463

Team Member	Role
Steven Johnson, PE	Principal In Charge
Ryan Nuesmeyer, PE	Project Manager
Darren Williams, PLS	ROW Design
Mike Nadeau, PLS/CFedS	Survey Manager
Freeman Marble	Survey Crew Chief
Gustave Denham II	ROW CADD
Allison Dennett, EIT	Design Engineer
Daniele Dearinger, EIT	Design Engineer
Malcolm Easton	Engineering CADD

Meridian provided topographic survey, roadway engineering design, right-of-way design, legal description/ document preparation to extend the existing sidewalk and assist the city in creating a safe route to Majestic Elementary school. This project included roadway widening, drainage design, and utility relocation design and coordination.

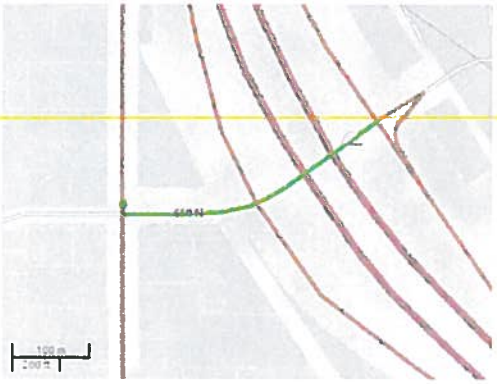
650 North and Main Street Interchange

Utah Department of Transportation (Clearfield, UT)

Contact: Michael Romero, PE — *Project Manager*
UDOT Region One, 801.620.1600

Team Member	Role
Darryl Fenn, PLS	Principal In Charge
Darren Williams, PLS	ROW Design
Mike Nadeau, PLS/CFedS	Project Manager
Tyler Baron, PLS	ROW Manager
Freeman Marble	Survey Crew Chief
Gustave Denham II	ROW CADD
Travis Williams	Survey CADD

Meridian provided right-of-way services for the redesign of the 650 North at I-15 Interchange. Responsibilities included conducting research for Federal, State, and private properties. Worked with engineering team to determine new right-of-way and easements needed to alleviate traffic issues in this area.



MERIDIAN ENGINEERING, INC

1300 East; Pioneer Road to 13200 South

Utah Department of Transportation (Draper, UT)

Contact: H.G. Kunzler, PE — *Project Manager*
H.W. Lochner, Inc., 801.262.8700

Meridian provided supplemental survey/mapping and right-of-way design services to H.W. Lochner as a sub-consultant in support of a UDOT/Local Government Project for Draper City. Services included establishing survey and right-of-way project control and preparing an overall Survey Control Diagram. To support engineering design for the widening and improvement of 1300 East, a detailed topographic design survey was performed to identify boundary survey information, major breaklines, drainage structures, and existing above-ground utilities with invert elevations in order to develop a comprehensive Digital Terrain Model of the existing surface. To support right-of-way acquisition, Meridian prepared all right-of-way maps and legal descriptions for required right-of-way takes and easements affecting 62 separate ownership parcels.

Team Member	Role
Darryl Fenn, PLS	Principal In Charge
Mike Nadeau, PLS/CFedS	Survey Manager
Tyler Baron, PLS	ROW Manager
Kyle Turner, PLS	Survey Crew Manager
Kurt Falkenthal, PLS	Project Surveyor
Aaron Inabnit, PLS	Survey Crew Chief
Gustave Denham II	Survey/ROW CADD

SR-26 (Riverdale Road); 1900 West to I-84

Utah Department of Transportation (Riverdale, UT)

Contact: Kevin Farley, PE — *Project Manager*
Baker, 801.8255.4400

Meridian provided design survey/mapping and right-of-way design services to Baker as a sub-consultant in support of new roadway design for the improvement of Riverdale Road along 1900 West. Meridian prepared right-of-way maps and legal descriptions for right-of-way takes and easements affecting 21 separate ownership parcels.

Team Member	Role
Darryl Fenn, PLS	Principal In Charge
Mike Nadeau, PLS/CFedS	Survey Manager
Tyler Baron, PLS	ROW Manager
Kyle Turner, PLS	Survey Crew Manager
Kurt Falkenthal, PLS	Project Surveyor
Freeman Marble	Survey Crew Chief
Aaron Inabnit, PLS	Survey Crew Chief
Gustave Denham II	Survey/ROW CADD

MERIDIAN ENGINEERING, INC

Mountain View Corridor; Redwood Rd. (10600 S.) to SR-201

Salt Lake County, UT

Contact: Bethany Shingleton — *ROW Manager*
HDR Engineering, 801.743.7800

Meridian provided ROW design, determined existing ROW, and prepared new ROW documents and maps in support of engineering design and ROW acquisition. Provided supplemental surveying, ROW permitting, new legal descriptions, new ROW markers, and special exhibits to support major utility relocations, such as Kern River Gas and PacifiCorp.

Team Member	Role
Darryl Fenn, PLS	Principal In Charge
Tyler Baron, PLS	ROW Manager
James Fisher Jr.	ROW Design
Gustave Denham II	Survey/ROW CADD
Mike Nadeau, PLS/CFedS	Survey Manager
Kurt Falkenthal, PLS	Project Surveyor
Jefferson Searle, PLS	Survey & ROW QC/QA

SR-173; Bangerter Hwy to 4800 West

Utah Department of Transportation (Kearns, UT)

Contact: Troy Peterson, PE — *Project Manager*
UDOT Region Two, 801.887.3637

Meridian provided ROW design services including preparation of GIS ROW maps for project management support and ROW acquisition tracking, as well as comprehensive supplemental surveys to facilitate engineering design.

Team Member	Role
Darryl Fenn, PLS	Principal In Charge
Jefferson Searle, PLS	Project Manager/GIS
Mike Nadeau, PLS/CFedS	Survey Manager
Gustave Denham II	Survey/ROW CADD
Freeman Marble	Survey Crew Chief

MERIDIAN ENGINEERING, INC

Jacques & Associates

Harrison Boulevard

Ogden City, UT

Team Member	Role
Sydne Jacques, PE	Principal In Charge
Megan Jacques	PI Project Manager

Contact: Taylor Nielsen, PE — *Development Engineer*
Ogden City Engineering, 801.629.8983

Harrison Boulevard is a primary north-south connector that serves as a main commuter route between North Ogden and Weber State University. Ogden City secured funding to widen a mile-long section of the road from 7th Street to 425 North from two lanes to three with a center turn lane to improve safety. As part of the project, the City realigned the intersection of 2nd Street and Sheridan Drive and installed bike lanes. This area of the road is mainly residential with most residents living in their homes for decades. Because of the established nature of the community, any changes or impacts to properties would require a hands-on approach with each stakeholder.

Jacques & Associates met individually with each resident to resolve concerns with right-of-way questions and access and utility issues, and coordinated throughout all construction processes. Utilizing a hotline, door-to-door visits, email updates, and door hanger flyers, we were able to engage the stakeholders in a way that when Ogden City performed a survey with the public, all surveys scored over 90% satisfaction with the public involvement on the project.

Murdock Canal Enclosure & Trail Project

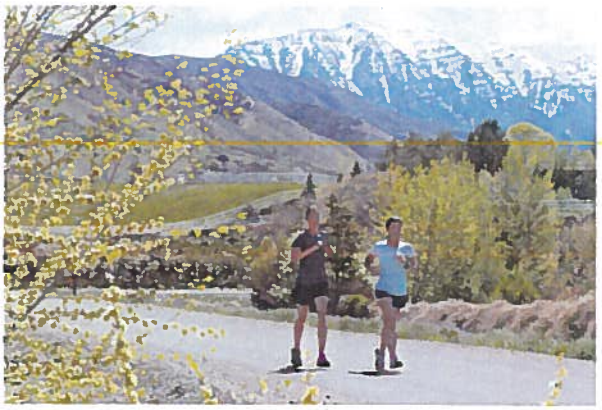
Utah County

Team Member	Role
Sydne Jacques	Principal In Charge
Scott Henriksen	PI Project Manager

Contact: Richard Nielson, PE — Utah County Engineer
Utah County, 801.851.8600

The Murdock Canal is a major aqueduct used to carry water from the Provo River Drainage to multiple communities in Utah Valley and the Salt Lake area.

Scott skillfully coordinated with 7 cities, 5 schools, hundreds of stakeholders, and 6 government agencies along the length of the 21-mile UDOT contract for 3 years to successfully complete the project.



Jacques & Associates met individually with each resident adjacent to the trail to resolve concerns with Right-of-Way questions, access and utility issues and coordinated throughout all construction processes.

Utilizing a hotline, door-to-door visits, email updates and door hanger flyers, the stakeholders received personal attention while their concerns were addressed in a timely manner.

MERIDIAN ENGINEERING, INC

Anticipated Percentage of Work to be Completed	
Darren Williams, PLS	8%
Darryl Fenn, PLS	1%
Ryan Nuesmeyer, PE	8%
Brad Mortensen, PE, PLS	5%
Tyler Baron, PLS	2%
Mike Nadeau, PLS/CFedS	2%
Sydne Jacques, PE	1%
Aero-Graphics	2%
KCI Transportation	2%

Percentage of Work to be Completed Locally

100%

WEBER COUNTY

County Engineer
Jared Andersen, PE

Project Manager
Rochelle Pfeaster

Principal in Charge
Darryl Fenn, PLS

Roadway Design
Ryan Nuesmeyer, PE

Steven Johnson, PE
Nichole Luthi, PE
Allison Dennett, EIT
Malcolm Easton

Additional Staff:
Randall Vickers, PE
Jaymin Vickers, EIT
Eric Porter

Project Manager
Darren Williams, PLS

QC/QA
Brad Mortensen, PE,PLS

Right-of-Way
Tyler Baron, PLS

Aaron Inabnit, PLS
Rachel Boyack
Jeff Maumalanga

Additional Staff:
Travis Jensen, PLS
Jefferson Searle, PLS
Gus Denham
Adrian Welsh
Marshall Burt
Brian Boehmer

Survey
Mike Nadeau, PLS/CFedS

Travis Williams
Geoff Bippes
Tanner Gutierrez

Additional Staff:
Kyle Turner, PLS
Kurt Falkenthal, PLS
Freeman Marble
Darrell Flake
Marc Flores
Tim Thurman

Public Involvement
Sydne Jacques, PE

Scott Henriksen
Darryl Jacques
Sheri Ostrom

Additional Staff:
Rosie Fullmer
Cheryl Wilde
Carin Henriksen
Shane Henriksen
Brooke Jacques

aero-graphics

Aerial Mapping
Aero-Graphics

KCI

Subsurface Utility Engineering
KCI Transportation

MERIDIAN ENGINEERING, INC

Cost Proposal

Bidder Name: Meridian Engineering, Inc.

1. List the name, job title, and hourly rate for any proposed personnel. Also include the approximate percentage of project to be performed by each person.

Name: Darryl Fenn, PLS	Title: Principal In Charge	$ 156	/ hour	1	%
Name: Darren Williams, PLS	Title: Project Manager	$ 96	/ hour	8	%
Name: Tyler Baron, PLS	Title: ROW Lead	$ 108	/ hour	2	%
Name: Aaron Inabnit, PLS	Title: ROW Lead	$ 68	/ hour	7	%
Name: Rachel Boyack	Title: ROW Technician	$ 45	/ hour	8	%
Name: Jeff Maumalanga	Title: ROW Drafter	$ 60	/ hour	8	%
Name: Brad Mortensen, PE, PLS	Title: QC/QA	$ 116	/ hour	5	%
Name: Ryan Nuesmeyer, PE	Title: Roadway Design Mgr.	$ 136	/ hour	8	%
Name: Steve Johnson, PE	Title: Lead Traffic Engineer	$ 156	/ hour	2	%
Name: Nichole Luthi, PE	Title: Roadway Designer	$ 96	/ hour	7	%
Name: Allison Dennett, EIT	Title: Roadway Designer	$ 86	/ hour	11	%
Name: Malcolm Easton	Title: Roadway Design Tech	$ 43	/ hour	11	%
Name: Michael Nadeau, PLS/CFedS	Title: Survey Manager	$ 121	/ hour	2	%
Name: Travis Williams	Title: Survey Technician	$ 67	/ hour	4	%
Name: Geoff Bippes	Title: Survey Field Crew	$ 58	/ hour	4	%
Name: Tanner Gutierrez	Title: Survey Field Crew	$ 30	/ hour	4	%
Name: Sydne Jacques, PE	Title: PI Manager	$ 150	/ hour	2	%
Name: Scott Hendrikson	Title: PI Lead	$ 110	/ hour	2	%
Name: Darryl Jacques	Title: PI Assistant	$ 90	/ hour	2	%
Name: Sheri Ostrom	Title: PI Assistant	$ 60	/ hour	3	%

Total Average $ / hour $81.89

2. Provide expected reimbursable expenses and rates associated to them. Specify if the rate is hourly, daily, etc.

Expense: KCI Technologies	$ 500	per test hole
Expense: Aero-Graphics	$ 7,520	total

Any deviation from this format may result in disqualification for proposal.

MERIDIAN ENGINEERING, INC

ATTACHMENT A
RESPONDENT QUESTIONNAIRE

1. **Respondent Information:** Provide the following information about yourself and your company.

Respondent Name: Meridian Engineering, Inc.
(Note: give exact legal name as it will appear on the contract, if awarded.)

Address: 9217 South Redwood Road, Suite A

City: West Jordan State: UT Zip Code: 84088

Telephone No: 801.569.1315 Fax No: 801.569.1319

Business Structure:

☐ Individual or Sole Proprietorship

☐ Partnership

☑ Corporation

☐ Other; list business structure: _____

2. **Contact information:** List the one person who Weber County or their representative may contact concerning your proposal.

Name: Darren Williams, PLS

Address: 9217 South Redwood Road, Suite A

City: West Jordan State: UT Zip Code: 84088

Telephone No: 801.458.1891 Fax No: 801.569.1319

Email: dwilliams@meiamerica.com

3. **References:** Give names of three people with whom you have worked on past projects of similar nature.

a. Name: Toby Mileski (Pleasant View City, Mayor)

Address: 520 West Elberta

City: Pleasant View State: UT Zip Code: 84414

Telephone No: 801.827.0463 Fax No: 801.782.0539

Email: tmileski@pleasantviewcity.com

b. Name: Matt Hartvigsen (North Ogden, City Engineer)

Address: 1716 East 5600 South

City: Ogden State: UT Zip Code: 84403

Telephone No: 801.476.9767 Fax No: 801.476.9768

Email: matth@jonescivil.com

c. Name: Dian McGuire (UDOT, ROW Lead)

Address: 4501 South 2700 West

City: Salt Lake City State: UT Zip Code: 84114

Telephone No: 801.965.4968 Fax No: 801.965.4838

Email: dmcguire@utah.gov

MERIDIAN ENGINEERING, INC

ATTACHMENT B
CONFLICT OF INTEREST – DISCLOSURE STATEMENT
Weber County
2380 Washington Blvd.
Ogden, Utah 84401

Name of Proposer: Meridian Engineering, Inc.

Name of Project: Surveying and Design Services on 3300 South

Stakeholders – Weber County, any affected land owners

Does Proposer, or any of Proposer's employees, have any relationship or bias towards or against any stakeholder, developer, contractor or subcontractor, have any relationship or bias that may create the perception of bias, or have any other conflict of interest or potential conflict of interest?

☐ **YES** (Myself or an employee, or member of my or employee's immediate family, has a material, personal, or financial interest in or fiduciary relationship to the stakeholder, developer, general contractor or subcontractor.) *(Please use a separate form for each individual with a conflict or potential conflict, and complete all applicable portions of the form. Attach additional sheets as needed.)*

☑ **NO** (Neither I nor any employee, or member of my or employee's immediate family, has a material, personal, or financial interest in or fiduciary relationship to any stakeholder, developer, general contractor or subcontractor. Also, no other relationship with or bias towards any stakeholder, developer, general contractor or subcontractor exists which will prevent me (Proposer) from submitting a non-biased bid/proposal.) *(Please complete the Signature section below.)*

Related-Party Transactions or Independent Judgment Impaired

Name and position or title of individual with Conflict of Interest

Individual associated with Proposer: _____

Other party: _____

Individual associated with other party: _____

Relationship between identified individuals: _____

Description of transaction involving identified individuals and dollar amount (if any): _____

_____

Decision-making authority of individuals with respect to that transaction: _____

_____

Potential effect on this Contract with Weber County: _____

_____

MERIDIAN ENGINEERING, INC

Signature

I hereby certify that the information I have given is true and complete to the best of my knowledge.

Name and Title of Person Completing Form (please print): Darryl Fenn, PLS

President

Signature: _____

Date: 3/8/2017

Weber County reserves the right to make the sole determination of the appropriateness of the Proposer. Failure to disclose real or perceived conflicts of interest may result in Proposer's proposal/bid to be deemed non-responsive or contract to be voided.

MERIDIAN ENGINEERING, INC

Darren R. Williams, PLS – Project Manager

Experience
11 Years

Education
AAS Surveying
Salt Lake Community College
2010

Professional Registrations
Professional Land Surveyor:
- Utah #4975981

Professional Affiliations
Utah Council of Land Surveyors (UCLS)

Mr. Williams is a Professional Licensed Land Surveyor with a proven ability to manage small and large projects for clients ranging from the Utah Department of Transportation (UDOT), local municipalities, to local School Districts. Darren clearly defines a projects strategic objective and focuses on maintaining a high level of quality at all times. His discipline-related experience includes management of engineering and roadway design surveys, post processing of field data including surface creation, right-of-way design, construction staking, and preparation of subdivision and record of survey plats.

Relevant Experience

WACOG—Washington Blvd. Widening; 2600 North to Mountain Road (North Ogden, UT): Project Manager, responsible for right-of-way design services in direct support of the design and widening of Washington Boulevard between 2600 North Street and Mountain Road. Researched existing right-of-way lines and property deeds for project area, developed existing right-of-way property map and property ownership spreadsheet, develop right-of-way design and GIS right-of-way map, and prepared right-of-way summaries, including ownership records, right-of-way plan sheets, and legal descriptions for right-of-way takes and easements.

WACOG—Monroe Blvd.; 1500 North to 3100 North (North Ogden, UT): Project Manager, responsible for providing survey and right-of-way design services in direct support of the design, widening, and extension of Monroe Boulevard between 1500 North Street and 3100 North Street. Meridian established survey control and prepare Survey Control Diagram, full design survey and prepare Survey Control Diagram, full design survey and prepare Digital Terrain Model (DTM) of the existing surface, developed existing right-of-way/property matrix and new right-of-way takes and easements affecting 34 separate ownership parcels. Prepared a final Record of Survey to file with the Weber County Surveyor's Office.

WACOG—2550 North; Safe Route to School (Pleasant View, UT): Right-of-Way Designer, provided right-of-way design, legal descriptions/ document preparation and preparation of right-of-way maps to assist the city in creating a safe route to Majestic Elementary School.

WACOG—20th Street Roadway Improvements (Ogden, UT): Provided surveying, utility location, and right of way services for the reconstruction of 20th Street in Ogden between Washington Boulevard and Wall Avenue. Right of way efforts included determining the existing right of way for the entire project and right of way design for 6 parcels that involved right of way takes and easements. This project was completed while employed at Caldwell Richards Sorensen (CRS).

200 East; 1400 North to Hyde Park Lane & 2200 North to North Logan Boundary (North Logan & Hyde Park, UT): Right-of-Way Designer, developed existing right-of-way parcel matrix and worked with engineering design team to identify right-of-way impacts and right-of-way design. Prepared all right-of-way maps, plans, and legal descriptions necessary for right-of-way takes and easements affecting approximately 50 parcels to support right-of-way acquisition.

MERIDIAN ENGINEERING, INC

Darryl J. Fenn, PLS – Principal-In-Charge/Survey & Right of Way

As President of Meridian Engineering, Darryl has performed as a Project Manager on many rights of way and surveying projects. Within the past three (3) years in addition to management, he has personally designed and prepared conveyance documents on five (5) large UDOT right of way projects. These are SR-89 (State Street), SR-68 (Redwood Road), SR-171 (3500 South), SR-48 (7800 South) and 1300 East, (Local Government, Sandy City). These projects equate to well over 500 parcels with nearly 2200 deeds, easements and other records. Darryl has managed right of way project in all regions of UDOT. His experience in right of way engineering, conveyance documents, deed research, boundary laws and principals, and roadway design offers UDOT and local government's peace-of-mind in knowing their right of way engineering needs are well cared for by a professional expert in right of way.

Experience
35 Years

Education
Mathematics/Surveying
Utah Technical College

Professional Registrations
Professional Land Surveyor:
- Utah #172851
- Idaho #7482
- New Mexico #11818
- Arizona #26053

Professional Affiliations
Adjunct Instructor (Geomatics), Salt Lake Community College

Utah Council of Land Surveyors (UCLS)

Relevant Experience

Mountain View Corridor, Redwood Road to 5400 South Street: Right of Way Project Manager responsible for supervising the right of way design and preparation of acquisition documents for approximately 15.7 miles of new freeway along the West side of the Salt Lake Valley.

SR-26 (Riverdale Road), 1900 West to Washington Blvd: Project Manager responsible for providing the Consultant Team with right of way engineering and design grade survey/mapping services. Riverdale Road serves as a primary East-West connector through Weber County. The project included 165 separate parcels of land and required approximately 700 conveyance documents.

I-15, 11000 South to 600 North, Salt Lake Valley: Project Surveyor responsible for the planning and implementation of the primary control and monumentation network that was used by all UDOT consultants for the reconstruction and widening of I-15. Right of Way Engineer responsible for the preliminary engineering of I-15 through Salt Lake Valley. This project included a high order control network and monumentation throughout the corridor and the interconnecting highways of I-80 and SR-201. Other major tasks involved an extensive mapping survey extending 2500' each way of the I-15 corridor and a preliminary property matrix of the overall project.

SR-89/US-91, Smithfield City to Idaho: Project Manager for Right of Way Engineering from Smithfield City to the Idaho state line (approximately 12.5 miles). This project included 199 separate parcels of land, consisting of 850 total documents (takes, easements, ownership records, and summaries).

MERIDIAN ENGINEERING, INC

Ryan Nuesmeyer, PE – Roadway Design Manager

Experience
7 Years

Education
BS Civil Engineering
University of Utah
2011

MS Civil Engineering & Project Management
University of Utah
2013

Professional Registrations
Professional Engineer:
- Utah #5170810-2201

Journeyman Electrician:
- Utah #5170810-5504

Professional Affiliations
Institute of Transportation Engineers (ITE)

American Public Works Association (APWA)

American Society of Civil Engineers (ASCE)

Ryan has designed and managed transportation projects ranging in complexity from the Draper Lone Peak Signal to the I-15 Layton Hill Field Road project. He has completed more than 20 projects in the last 2 years, with project types including intersection improvements, signal design, ATMS, roadway widening, pavement preservation/ rehabilitation, and trails. This experience has included tasks such as traffic analysis, public involvement, project management, plan preparation, specifications, estimates, and advertising documents.

Ryan's previous experience as a UDOT employee in Region 2 Construction & Materials, coupled with his design experience, provide Ryan with the skills necessary to deliver a project that meets FHWA design standards and is also constructible.

Relevant Experience

WACOG—2550 North; Safe Route to School (Pleasant View, UT): Project Manager, responsible for managing the design of the pedestrian improvements (e.g. sidewalk, crosswalks, flashing beacons, etc.) and roadway improvements such as pavement widening, drainage system modifications, and utility design/relocations. The existing pavement structure is approaching failure and has varying cross slopes due to multiple overlays. The City is pursuing funding to reconstruct the pavement within 5 years. To avoid the need to reconstruct the curb/gutter that will be built as part of this project, Ryan and his team designed a pavement widening with varying cross slopes and provided this as a digital model that can be used by the contractor's GPS-guided equipment. This allowed the curb/gutter to be built in such a way that it will be compatible with this project while facilitating an even 2% crown when the pavement is reconstructed with the future project; all without reconstructing the curb and gutter and impacts to adjacent property owners.

Tooele County Midvalley Connector, Corridor Preservation (Tooele County, UT): Engineering Manager, responsible for overseeing all engineering design including roadway, drainage, traffic signal, etc. for a new roadway and interchange on open ground in Tooele County. As a corridor preservation project funded with County funds, the goal for the engineering effort on this project was to complete design sufficient to acquire adequate Right-of-Way, but not complete construction documents. Ryan's team evaluated various design alternatives to identify the most appropriate horizontal and vertical alignment for the location that would minimize imported materials and limit ROW needs. Once an approved design was established, the design was finalized and delivered to Tooele County in multiple formats (pdf, design surface, CADD files, hard copy, etc.). This redundancy in delivery of the details of the roadway design will help to ensure that the alignment is retraceable when the design is finalized and completed as construction funding becomes available.

US-60 & 2700 East, South Weber Traffic Signal (South Weber, UT): Project Manager, responsible for the design of a new traffic signal in South Weber. With nearby commercial and residential development, traffic had increased to a point to warrant a traffic signal at the subject intersection, which was previously stop controlled. Ryan and his team designed the new traffic signal, which included curb/gutter modifications, new sidewalk/pedestrian access ramps, and a revised striping plan. He also coordinated with impacted utility companies to organize the required relocations and power connections. This project was contracted, designed, built, and completed in less than 1 year.

MERIDIAN ENGINEERING, INC

Michael W. Nadeau, PLS/CFedS – Survey Department Manager

Experience
22 Years

Education
AAS Surveying
Salt Lake Community College, 1999

AS Geomatics
Utah Valley University, 2015

BS Geomatics
Utah Valley University, 2016

Professional Registrations
Professional Land Surveyor:
- Utah #4938744
- Idaho #15877
- Nevada #20267
- CFedS #1115

Professional Affiliations
Adjunct Instructor (Geomatics) Salt Lake Community College and Utah Valley University

Secretary/Treasurer for the Western Federation of Professional Surveyors (WFPS)

WFPS Delegate for the Utah Council of Land Surveyors (UCLS)

Member of the National Society of Professional Surveyors (NSPS)

Mr. Nadeau is a Professional Licensed Land Surveyor and Certified Federal Surveyor with over 22 years of across-the-board training in land boundary determination, geodetic surveying, cadastral surveying, right of way design, legal boundary issues, and corridor preservation experience. His background includes encroachment issues in corridor surveys, right of way design surveys and Sub-Surface Utility Engineering Surveys (SUE). His experiences range from retracement of 150-year-old public and private boundary surveys to modern infrastructure surveys. He has successfully performed as a Project Manager and Survey Coordinator with some of Utah's biggest firms such as UDOT, Thiokol Propulsion, and Hercules Aerospace, as well as the Provo River Canal Users Association. With Michael's 22 years of experience, he can offer confidence with a grounded knowledge of project management, design support, surveying, mapping, right of way and construction.

Relevant Experience

WACOG—Washington Blvd. Widening; 2600 North to Mountain Road (North Ogden, UT): Survey Manager, responsible for survey services in direct support of the design and widening of Washington Boulevard between 2600 North Street and Mountain Road. Aided in the development of right-of-way design and GIS right-of-way map, and prepared right-of-way summaries, including ownership records, right-of-way plan sheets, and legal descriptions for right-of-way takes and easements.

WACOG—Monroe Blvd.; 1500 North to 3100 North (North Ogden, UT): Survey Manager, responsible for providing survey services in direct support of the design, widening, and extension of Monroe Boulevard between 1500 North Street and 3100 North Street. Meridian established survey control and prepare Survey Control Diagram, full design survey and prepare Survey Control Diagram, and full design survey and prepare Digital Terrain Model (DTM) of the existing surface. Prepared a final Record of Survey to file with the Weber County Surveyor's Office.

WACOG—2550 North; Safe Route to School (Pleasant View, UT): Survey Manager, aided in the right-of-way design, legal descriptions/document preparation and preparation of right-of-way maps to assist the city in creating a safe route to Majestic Elementary School.

650 North and Main Street Interchange (Clearfield, UT): Project Manager, provided right-of-way services for the redesign of the 650 North at I-15 Interchange. Conducted research for Federal, State, and private properties. Worked with engineering team to determine new right-of-way and easements needed to alleviate traffic issues in this area.

MERIDIAN ENGINEERING, INC

Brad T. Mortensen, PE, PLS – Project Manager, QC/QA Manager

Experience
29 Years

Education
BS Civil Engineering
California State Polytechnic University, Pomona, 1992

Professional Registrations
Professional Engineer:
- Utah #271154
- Wyoming #12712
- California #72024

Professional Land Surveyor:
- Utah #271154
- Idaho #12101
- Nevada #17602
- Wyoming #12712
- California #7103

Professional Affiliations
Utah Council of Land Surveyors (UCLS)

National Society of Professional Surveyors (NSPS)

International Right of Way Association (IRWA)

Utah Geographic Information Council (UGIC)

Mr. Mortensen has experience with all aspects of transportation and infrastructure design, ranging from geodetic control, mapping, roadway design, and construction of freeways and state routes, as well as state, municipal, utility, and commercial/retail capital improvements. Brad has worked with private entities, municipalities, and UDOT to complete many projects. Additionally, Brad is experienced with right-of-way and boundary analysis and design.

Brad has demonstrated, with his experience working on projects throughout the western United States, that he understands our clients' needs and will proactively work to find solutions. Brad administered the Total Quality Management (QA/QC) program at the corporate level, including training and mentoring. He has evaluated and consolidated distinct programs from multiple satellite offices into a single concise corporate-wide program. He researched and evaluated several standards and developed corporate-wide CAD standards, including file structures for projects and civil 3D templates. Brad also participated on the UDOT committee in development of Surveying Standards (2014–2015), and he was instrumental in finding, gathering, collecting, and integrating most of the information and data used to create the UDOT 2015 Surveying and Geomatics Standards Manual.

Brad has experience with all aspects of the design and construction of capital improvement projects including permitting, data acquisition, entitlements, right-of-way/title, design, construction, as-built/monitoring and maintenance. His roles include project management and QC/QA management. Brad is instrumental in playing a key role in project planning for jobs with specific QC/QA requirements and standards.

Relevant Experience

West Point Pavilion; Anna Caroline Drive, North and West of SR-172 (5600 West) and Parkway Blvd.; West Valley City, Utah: This project was a full right of way and improvement design that included widening of Parkway Blvd. and the intersection with SR-172; provided planning direction and QA/QC services for the control, data acquisition, boundary, and right-of-way design, support for design activities, construction layout, and final plats/conveyances.

Legrande Vacation, 1200 South Realignment; SR-91 to SR-165; Logan, Utah: This project was a full right-of-way and improvement design that included the vacation and realignment of city streets, several creek crossings, and the widening of SR-165 and several intersections. Provided planning direction and QA/QC services for the control, data acquisition, boundary, and right-of-way design; support for design activities; construction layout; and final plats/conveyances.

MERIDIAN ENGINEERING, INC

Sydne Jacques, PE – Public Involvement Manager

Experience
22 Years

Education
BS Civil Engineering
Brigham Young University
1989

Professional Registrations
Professional Engineer:
Utah #177234-2202

Certified Facilitator
International Association for Public Participation, 2008

Certified Facilitator
International Partnering Institute, 2011

Sydne is the Project Principal for all public involvement/public information projects. She provides strategy, project management, facilitation, and chocolate chip cookies for all projects. Sydne has led over 210 PI projects in the past 22 years.

Sydne is a licensed professional engineer in Utah. Her engineering experience includes surveying, material labs, inspection, design, project management and public relations. Her broad experience in engineering and her strong desire to work with people make her a perfect fit for public information/public involvement.

Relevant Experience

CEO, Jacques & Associates; Orem, Utah — 1994 -present
- Provide project oversight and project management for PI projects
- Facilitate project teams to create and implement effective PI strategies
- Work with difficult stakeholders to resolve issues
- Build relationships with cities, counties, schools, and stakeholders that are affected by construction projects. Provide opportunities to listen and to implement their ideas whenever possible.
- Plan and facilitate Partnering Workshops

Bureau of Reclamation; Provo, UT — 1992-1998
- Provo Area Office Director of Public Affairs
- Design Engineer and Team Leader
- Certified Trainer – Seven Habits of Highly Successful People, Certified through Covey Leadership Center

Uinta National Forest — U.S. Forest Service; Provo, UT – 1987 - 1992
- Survey Crew Chief
- Designer – roads, campgrounds, water systems
- Facilitator – Total Quality Management – Certified facilitator through 3M Company

Montana Highway Department; Great Falls, MT — 1982-1985
- Materials Laboratory Technician
- Survey Technician